RAAD

Report Archive and Distribution

User Manual

Version 1 Release 4

RAAD (Report Archive and Distribution)

RAAD is a comprehensive report distribution and control system that allows you to manage and control your spooling environment.

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RAAD Introduction

Report Archive and Distribution (RAAD) is a comprehensive report distribution and control system that provides a wide array of features, allowing you to manage and control your spooling environment. RAAD is an online application, that runs under CICS or the optional product CSI-TMAN. You can customize RAAD and its components online through easy-to-use 3270 screens. User-written CICS application programs can spool reports to RAAD's internal queue (SPL) or to any POWER queue. RAAD can automatically insert report head and/or feet that have been defined by your application program. RAAD contains a special PC program that enables you to easily download mainframe reports to your PC using virtually any 3270 emulator on your PC.

RAAD features include

- Accessing spooled reports from
    - The POWER Reader (RDR), Punch (PUN), List (LST), or Transmit (XMT) queues
    - The VM reader (VMR), Punch (VMP), List (VML) queues
    - From an existing CSI-ARCHIVE dataset (ARC)
- An online spooling facility that you can use to submit batch jobs for file backups or other purposes.
- Archiving reports automatically, using the POWER External Device Writer support. This requires a minimum of JCL and/or procedural change for your installation.
- Archiving POWER LST queue output from any program..
- Storing reports in a DASD efficient manner, meaning that the reports are compressed to conserve disk space.
- Retaining on the Archive Dataset according to user-defined criteria. Any combination of the following can be used:
    - Number of days
    - Number of generations
    - Specific retain to date.
- Periodicly scanning your spooler queues. As reports are encountered during the scan, they can be archived, printed to any system-attached printer, or used as a trigger to cause JCL to be submitted to the POWER RDR queue.
- Selecting reports based on several fields maintained by operating system spoolers. Some of these are:
    - Job name
    - Class
    - Disposition
    - Priority
    - Remote ID

  - Origin and Destination Node
  - POWER user information from the * $$ LST card
- Viewing reports online or printing to any network-attached printer.
- Viewing the output of executing VSE jobs while they are being generated.
- Providing extensive data-search capabilities.
- Viewing reports in character or hexadecimal format.
- Report viewing for all 3270 models.
- Reformatting reports by column when viewed and/or printed. This feature can prevent unauthorized users from having access to privileged data.
- Managing spooler queues from an easy-to-use 3270 application program.
- Supporting all printers attached to CICS, and TCP/IP printers (LPD) if you are running TCP/IP for VSE.
- Providing access to reports and to RAAD functions by individual users with RAAD User Profiles.
- Preventing or allowing access to spooler queues by report details such as job name, class, origin, and destination.

CSI-QCOPY

CSI-QCOPY is a VSE batch component of RAAD. With CSI-QCOPY

- Any combination of reports from any input source can be combined in a single execution of CSI-QCOPY.
- Reports can be selected from each input source by individual report names or by generic selection masks.
- Entire reports can be selected, specific page ranges can be selected, or pages can be selected based on selection criteria using data contained in the report.
- Any combination of output destinations can be generated in a single execution of CSI-QCOPY. Selected sections of a report can be broadcast to any combination of Output Destinations.
- Single reports can be re-segmented by page, based on comparisons of data contained in individual report pages.
- Multiple reports can be combined, sorted, and re-segmented by page, based on comparisons of data contained in individual report pages.
- Multiple reports can be merged, based on user defined merge keys.

CSI-QCOPY can reformat selected pages of your reports. Specified columns can be rearranged or removed from the report. This feature can prevent unauthorized users from

having access to privileged data. The following list states some of the advantages of CSI-QCOPY.

- Reports can be saved to disk or tape files for backup.
- CSI-QCOPY can selectively reload reports from existing POWER POFFLOAD tapes.
- CSI-QCOPY can access reports from, and add reports to your RAAD dataset.
- The CSI-QCOPY POWERSEG Command can segment the output of multi-step jobs.
- The CSI-QCOPY POWERCMD and/or VMCMD Commands can execute POWER and/or VM Console Commands from a batch job stream.
- CSI-QCOPY uses the POWER XPCC interface for generating output reports and altering or deleting input reports. You can access reports using CSI-QCOPY's own physical IOCS routines for maximum efficiency. The POWER GETSPOOL, CTLSPOOL, and PUTSPOOL facilities are not used.
- CSI-QCOPY can be executed from your System Console. This is valuable if you loose your POWER, Reader Queue and need to do an emergency restore of a CSI-QCOPY Archive dataset.
- RAAD can submit CSI-QCOPY jobs automatically, either by time of day or in response to other activity in your mainframe.
- You can control RAAD scheduled processes on holidays using an easy to generate Holiday Table.

New for This Release

This section highlights the new features that have been added to this release of CSI-QCOPY. Detailed information on each of these features can be found in the remainder of this manual.

Note: Release levels of CSI-QCOPYwere renumbered when this product was renamed from BIM-QCOPY. Release numbers are now maintained in sync with RAAD, also available from Connectivity Systems, Inc.)

- Reports can be directed to an HFS file system.
- Reports can be read from an HFS file system.
- Output can be produced in PDF format.
- Miscellaneous bug fixes revealing as of yet unknown bugs.

RAAD Overview

RAAD supports access to the following spooler queues:

- LST—VSE/POWER List Queue
- PUN—VSE/POWER Punch Queue
- RDR—VSE/POWER Reader Queue
- XMT—VSE/POWER Transmit Queue
- .VML—VM List Queue
- VMP—VM Punch Queue
- VMR—VM Reader Queue
- RAD—RAAD Archived Reports
- SPL—RAAD Online Spooling Reports
- ARC—BIM-ARCHIVE dataset for existing users of BIM-ARCHIVE
- DOC—RAAD Document Storage Queue

Using any of these queues is optional and is controlled through User Profiles. See "RAAD User Profile Definition," page 26.

RAAD contains the following components:

External Device Writer

RAAD installs a VSE/POWER External Device Writer, program CSIRAA30, transaction RAAS. Program CSIRAA30 runs under CICS and is written in conformance with the VSE/POWER Application Programming Manual SC33-6374. This program was first available in 1990 as the product BIM-ARCHIVE from B I Moyle Associates, Inc., and proved over the years to be both reliable and completely independent of POWER release changes.

To use the External Device Writer, start the RAAD transaction in CICS. See "Activating the External Device Writer," page 143. Then start the External Device Writer at the VSE console for a class or classes. When a report becomes available in the POWER LST

queue, VSE/POWER directs it to the RAAD External Device Writer. RAAD checks its catalog and processes the report accordingly.

Before using this feature, you will need to

- Allocate at lease one unique class in the LST queue for the External Device Writer's exclusive use
- Schedule the VSE Console command to start the process following IPL
- Change your VSE JECL to direct the reports to the class (or classes) that RAAD is using for the External Device Writer

Both store a report on RAAD and print it on your system printer, change the JECL to direct the report to RAAD's class, and generate a matching Catalog entry that alters the report to the proper class for printing on completion.

Existing CSI-ARCHIVE users migrate to RAAD quickly and easily. See the section "Converting from BIM-ARCHIVE to R," page 206, for more information.

Use of the External Device Writer is controlled through the System Configuration Display using the RAAD transaction. There are additional customization fields that you can supply. See "RAAD System Configuration," page 97, for more information.

Spooler Polling

RAAD can be instructed to periodically scan your spooler queues (POWER, VM, and RAAD's online spooling queue) looking for reports to process. This process was first supplied in 1988 in the BIM-PRINT product from B I Moyle Associates, Inc., and is a proven and almost completely transparent method of accessing spooler data.

At an interval you specify, RAAD scans through your Spooler Queues, matching what it finds to entries defined in the Spooler Definition List. See "Spooler Polling," page 199, for information on how to establish this list. Matching entries can be directed to a printer, written to RAAD, or used to trigger a CSIQCOPY process.

Some minor modifications to your JECL may be necessary, such as leaving a report in Disposition Hold until after RAAD Spooler Polling has processed it. For the most part, however, the Spooler Polling feature of RAAD is transparent to your daily operations.

Existing BIM-PRINT users can take advantage of RAAD Spooler Polling immediately, using the migration process. See section "Converting from BIM-PRINT to R," page 204, for more information.

The System Configuration Display controls the Spooler Polling Facility using the RAAD transaction. There are additional customization fields that you can supply. See "RAAD System Configuration," page 97, for more information.

Cross-Partition Interface

A VSE batch program (CSI-QCOPY or CSIRAAD) can access data contained in RAAD. You can establish communications between VSE partitions using the VSE XPCC interface or TCP/IP, provided that you also have TCP/IP for VSE running on your mainframe. Cross-partition processing was first available in 1990 as the product BIM-ARCHIVE from B I Moyle Associates, Inc., and proved, over the years to be both reliable and completely independent of VSE release changes.

If you have not changed the default in the Cross-Partition Interface, you do not need to do anything. If you have changed the XPCC ID, you must tell CSI-QCOPY and CSIRAAD about the change:

- CSIRAAD—ENABLE|DISABLE XPCC(cross.partition.id)
- CSI-QCOPY—OPTION RAADID(cross.partition.id)

The RAAD Batch Utility Program, CSIRAAD, requires the use of the XPCC interface for cross partition processing. CSI-QCOPY can use either the XPCC or TCP/IP connection. See the *CSI-QCOPY Installation and Operations Guide* for more information.

The System Configuration Display controls the use of the Cross-Partition Interface using the RAAD transaction. There are additional customization fields that can be supplied. See “RAAD System Configuration,” page 97, for more information.

QCOPY Submission

CSI-QCOPY jobstreams can be maintained and submitted from the RAAD online system.

For every report that you want to use as an input to an online generated CSI-QCOPY process, you need to provide a Report Definition. See “RAAD Report Definition,” page 45. In each input report, you, need to define one or more fields. See “RAAD Field Definition”, page 49, for more information.

You must supply an Output Definition (see page 57) for every output report you want to produce by online RAAD processing. In each output, you may need to define one or more selection or segmentation operations. See “Selection Entry,” page 59, for more information.

For every CSI-QCOPY process you want to run, you also need to supply a QCOPY Job Definition (see page 66), which combines the defined reports and outputs. The QCOPY Job Definition creates a batch CSI-QCOPY jobstream.

Using the QCOPY Submission feature of RAAD is optional and is controlled through the System Configuration Display using the RAAD transaction. If you use this feature, you also need to create a skeleton CSI_QCOPY jobstream using the System Configuration Display (see page 97).

"Appendix: Sample QCOPY Process,", page 222, contains a complete sample of a QCOPY Job to process the CICS Transaction Server Dump Data Set, which splits out individual transaction dumps into separate reports in the POWER LST queue. A review of this process explains how the QCOPY process works in RAAD.

Report Viewing and Printing

RAAD can view and optionally print any report from any of the supported queues. Viewing and printing was first supplied in 1988 in the BIM-PRINT product from B I Moyle Associates, Inc., and is a proven and robust access to spooled reports. RAAD improves on the older capabilities by providing for Online customization and expanded access to the Spooler Queues.

You need to define a User Profile for each user that is authorized to view and/or print from one or more of the spooler queues supported by RAAD. See "RAAD User Profile Definition," page 26, for more information. You can approve or deny access to individual spooler queues. In addition you can also

- Restrict a user to one or more classes
- Control the response to the Delete, Alter, and Release commands
- Restrict a user to only certain jobs, generically or specifically

All of this customization is done online and takes effect immediately on entry.

It is not necessary to define each individual printer in your network. A default printer, named "$$$$," can be defined, which RAAD will use to generate a printer definition when the printer is not otherwise defined. This feature can be useful in older CICS networks using 3287-compatible printers. See "RAAD Device Definition," page 70 for more information.

You can also direct printing to TCP/IP devices provided that you have TCP/IP for VSE running on your mainframe. These printers must be individually defined because they each have a unique IP address that cannot be derived generically. The TCP/IP printer can be located anywhere, provided it is connected to the TCP/IP network and you can ping it.

You can also direct printing to your own or another PC using nearly any available 3270 emulator. RAAD supplies a PC component that can be used to download reports for processing on a PC. This program runs under Microsoft Windows 95 and later releases only.

You can also direct reports to RAAD Writers. RAAD Writers are installed for printing to the

- VSE/POWER LST Queue (LST)
- VSE/POWER Reader Queue (RDR)
- RAAD Online Spooling Queue (SPL)
- RAAD archive itself (RAD)

You can define additional Writers as needed. You can even write a CICS application program to accept data from RAAD through the Writer mechanism.

RAAD treats the following printers and applications the same:

- 3287-compatible printers
- TCP/IP printers
- Writers to VSE/POWER and RAAD
- Writer programs

These printers and applications are collectively known as devices. The RAAD transaction is used to define devices.

Existing BIM-PRINT users will feel right at home with the RAAD Viewing and Printing Feature. Existing BIM-ARCHIVE users will appreciate the expanded capabilities and ease of using the RAAD View Display.

Online Spooling Facility

Using the RAAD Online Spooling Facility, your CICS applications can generate output for the VSE/POWER queues, or to the RAAD Online Spooling Queue itself. This facility is similar to that first provided in 1988 as a part of the BIM-PRINT product from B I Moyle Associates, Inc.

The RAAD Online Spooling Facility (SPL) is not the same as that provided as a part of BIM-PRINT. Some compatibility issues may arise for existing BIM-PRINT users. RAAD‘s user interface is much simpler to use.

There are only three functions needed to spool reports to the RAAD Online Spooling Facility:

- **Write**—open the report; any necessary initialization occurs on the first use of this function
- **Close, Append**—close the report but leave it open for another task to resume writing
- **Close, Final**—close the report and dispose of it

For more information on the use of the RAAD Online Spooling Feature, see the section “RAAD (SPL) Online Spooling Facility,” page 151.

Unlike BIM-PRINT, SPL reports can be continued across CICS shutdowns if you have a mechanism to save the RAAD token across the shutdown. RAAD SPL reports do not use CICS Temporary Storage but are instead written to the RAAD dataset itself. You can also direct SPL reports to a separate VSAM file. For more information on compatibility issues, see “RAAD Online Spooling Facility for BIM-PRINT Users,” page 160.

Web Interface

Using the Web interface to RAAD, you can access the RAAD queues through the Internet using any Web browser. The Web interface supplies you with access to the operational components of RAAD. You can:

- Access any of the Spooler Queues
- Alter information in the Spooler Queue
- View report information from the Spooler Queue
- Control printing of reports on network printers
- Control RAAD operations

Web access is described in detail in the section titled “Using the RAAD Web Interface,” page 147.

CSI-QCOPY Batch Processing

CSI-QCOPY is a component of RAAD that transfers, archives, combines, re-segments, and/or re-sequences reports from any combination of VM/SP’s Spool Queues, POWER Spool Queues, POWER POFFLOAD tapes, BIM-ARCHIVE datasets, RAAD datasets, or CSI-QCOPY Archive datasets. CSI-QCOPY is an updated version of BIM-QCOPY from B I Moyle Associates, Inc., which was first released in 1988 and proved itself to be a powerful and flexible tool for manipulating report data.

CSI-QCOPY remains a VSE batch process. It is documented in a separate manual, titled *CSI-QCOPY Installation and Operations Guide*. RAAD extends the QCOPY process by providing an online interface that allows you to maintain QCOPY parameters through a series of interactive 3270 screens.

CSI-QCOPY directs its output to the RAAD dataset. This is done by using “RAD” as the output queue in the QCOPY “OUTPUT” sub-command. To enable this capability, you must also ensure that the RAAD Cross-Partition Interface is enabled and active at the time the CSI-QCOPY job is run. See “Cross-Partition Interface Customization,” page 103, for more information.

Existing BIM-QCOPY users can use their existing batch processes without modification with program CSI-QCOPY. The switch from using BIM-QCOPY to CSI-QCOPY is transparent.

RAAD Writer Facility

RAAD contains a powerful writer facility that allows you to write reports to the POWER RDR, LST, or PUN queues, to the RAAD SPL queue, and to the RAAD dataset itself. This Writer facility has been a component of BIM-PRINT from B I Moyle Associates, Inc., since 1988 and has proved to be reliable and efficient.

RAAD installs several Writers, one of which is named "$RAD." This Writer takes input data from RAAD and directs it to the RAAD dataset. To use the "$RAD" Writer, enter "$RAD" in place of a printer and RAAD directs input data to the RAAD dataset.

You can use the "$RAD" Writer from the RAAD Queue Display, the RAAD View Display, RAAD Spooler Polling, or the Online Spooling Facility. The "$RAD" Writer supplies you with flexibility in your choices to add reports to the RAAD dataset. Using the "$RAD" Writer is optional.

The RAAD Catalog

Regardless of which methods you use to direct reports to RAAD, you must have a corresponding Catalog entry for all reports retained on the RAAD dataset. Since RAAD Catalogs can contain generic selections, a single Catalog entry can be used for multiple reports. For example, specifying a job name of "RA*" in the RAAD Catalog allows that Catalog Entry to control all jobs prefixed with "RA." The Catalog Definition process maintains the RAAD Catalog entries online. See "RAAD Catalog Definition," page 40, for more information.

PC Download

Reports identified to RAAD can be conveniently downloaded to a network-attached PC. This download occurs using LU2 or directly through TCP/IP. You can automate this PC download for trouble-free operation. For more information on PC Download feature or RAAD, consult the help files associated with the PC program. RAAD PC software is available on the Web in the "Download" area at

www.bimoyle.com

Job Completion

RAAD provides a great deal of flexibility in its completion processing. The completion processing is split into two categories:

- **NORMAL**—Normal completion defines the completion process to undertake when everything worked as expected.
- **ABNORMAL**—Abnormal completion defines the completion process to undertake when something went wrong.

Whenever completion is available in RAAD, you can perform one of the following actions:

- **DEL**—Delete the report immediately.
- **DSP**—Use normal POWER disposition rules; that is, DISP=D reports are deleted, and DISP=K reports are altered to DISP=L.
- **LEV**—Leave the report alone.
- **ALT**—Alter the report. When you request Alter, you can alter one or more of the Class, Disposition, Priority, Power SysId, Power Remote ID, Power Destination Node, or Power Destination User values.

Regardless of which of these four methods you use to direct reports to RAAD, the completion specified on the RAAD Catalog takes precedence over any other completion specified. The exception to this is if you are using Spooler Polling to direct the report to RAAD. In this case, “LEV” is not a valid option and is overridden.

RAAD File Structure

RAAD contains a highly flexible method of organizing archived report information. This section describes the various control structures that are available for your use.

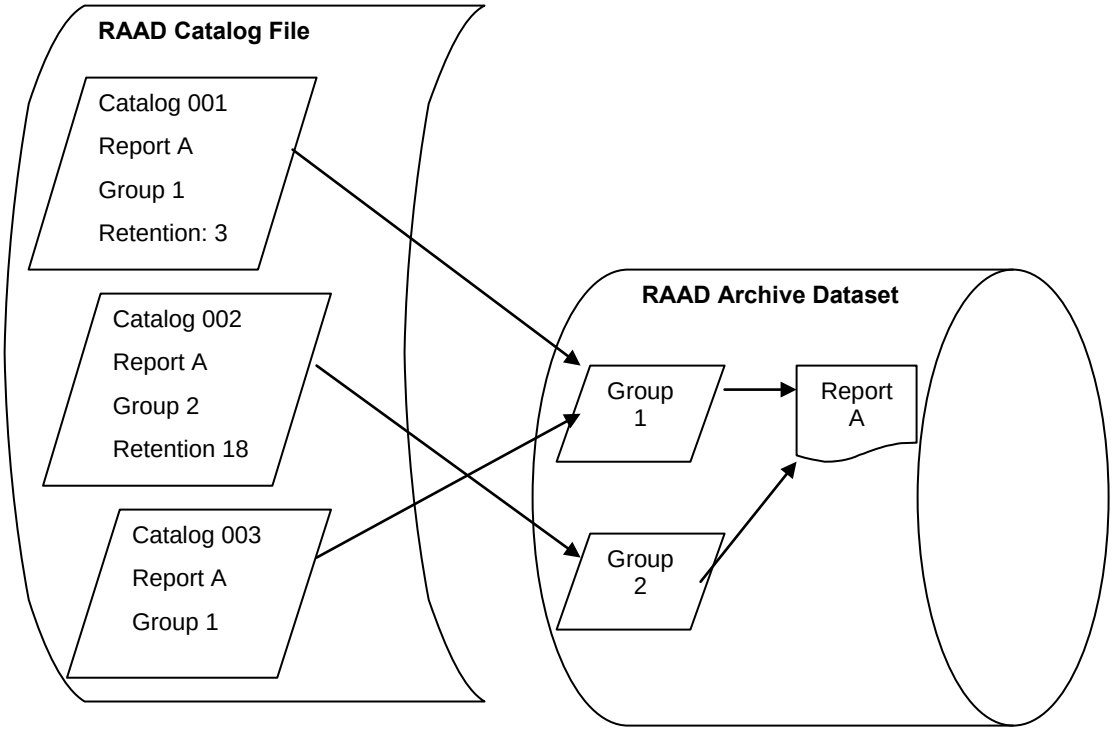
There are two control structures that you can modify to fit your installation requirements, Catalog and Group. The Catalog contains the rules for retention of report information on the Archive Dataset. The retention period can be specified in number of days, number of generations, or a specific date. You can use one or any combination of the three methods of controlling report retention.

Since not all reports have the same retention requirements, the Catalog also contains identifying information to uniquely associate a report, or group of reports, with the Catalog‘s retention rules. Identifying information includes Job name, class, priority, disposition, and several other fields. You can be as specific or as general as required when entering report identification data. RAAD can generically match reports to the Catalog entry if required.

The Group name identifies how RAAD stores the report in the RAAD Archive Dataset. After a report is matched to a Catalog entry, RAAD stores the report in the RAAD

Archive Dataset by the Group name specified in the Catalog Entry. This Group name is the primary key RAAD uses to subsequently access archived report information. Each Group can have its own sort sequence. For example, in one Group you can sequence the reports by Job name, while in another, you can sequence the reports by Job name within Date and Time. A Group can optionally specify a file other than the system default for report storage. This allows you to control data space usage.

Catalog entries do not have to specify unique Group names. More than one Catalog entry can direct its output to a single Group name. Groups provide a convenient way of organizing reports for subsequent retrieval. For example, all reports for a certain user department can be collected into a single group, even though the report names, or other identifying information, are such that several Catalog entries are required to identify them.



A single input report can be selected by more than one Catalog entry and assigned to more than one group. When this occurs, RAAD creates several pointer records in the Catalog. However, the report data is only stored in the RAAD Archive Dataset once.

Consider the sample arrangement above. “Report A” matches the selection criteria for all three Catalog entries, causing it to be archived in both “Group 1” and “Group 2.” The report is written one time to the data component of the RAAD Archive Dataset, and two pointer records are created, one for each Group. The pointer record for “Group 1” l contains a reference to two Catalog entries and the pointer record for “Group 2” contains only a single Catalog reference.

When retention is tested for expiration using the Daily Purge process, each Catalog entry that selected a report is checked for expiration. Reports are not deleted until the retention is exceeded in all relevant Catalog entries.

For example, assume that in the sample arrangement above, “Catalog 0001” specifies three days for retention, and “Catalog 0002” specifies 18 days. A report that is selected by both Catalog entries remains on the file and in “Group 1” for 18 days, the longer of the two retention periods.

Report retention is checked against the current state of the Catalog entry when the Daily Purge process is run. If, for instance, a report is placed on the file with the Catalog specifying three days retention and the Catalog is subsequently changed to 11 days retention, the report remains on the file for 11 days. Likewise, if the original Catalog specification is 14 days and later the retention period is changed to five days, several reports may become eligible for deletion the next time the Daily Purge process is run. Exercise caution when changing retention periods.

RAAD allows you to adjust the retention period for individual reports. You can make a report permanent, or force its retention to a specific date. Refer to section “RAAD Queue Display,” page 111, for more information.

RAAD Files

RAAD requires four VSAM files. The key structure varies somewhat between the files. See “RAAD Installation,” page 183, for the IDCAMS parameters to use when creating these files. The files are summarized in the following table.

File Name	RAAD Name	Contents
RAADFIL	RAAD File	Stores the settings maintained by the various 3270 displays.
RAADCFL	Catalog File	Stores the pointers for the reports stored in RAAD.
RAADDFL	Data File	Is the default data file for reports stored in RAAD. You can have multiple data files within your RAAD implementation.
RAADTFL	Temporary File	Stores temporary information, such as the printer queues and restart information for the SPL queue.

Back up the RAAD File, Catalog File, and Data Files (RAADFIL, RADCFL, and RAADDFL) frequently. RAAD does not supply a backup program. You can use IDCAMS or any third-party VSAM utility you have to backup the files.

The Temporary File does not need to be backed up. If a problem occurs on the Temporary File, delete and redefine it, run the RAAD Batch Utility to initialize the file, and restart CICS.

RAAD File Backup

Perform the following steps when backing up the RAAD Files:

1. Run the batch utility as shown below:

   ```
   // EXEC CSIRAAD
      DISABLE
   /*
   ```

   Or

   Manually disable the system by using the command “DISABLE” on the RAAD System Status Display.

2. Run your backup using your favorite VSAM utility program.

3. Run the batch utility as shown below:

   ```
   // EXEC CSIRAAD
      ENABLE
   /*
   ```

   Or

   Manually enable the system by using the command “ENABLE” on the RAAD System Status Display.

You cannot execute any RAAD functions while the system is disabled. Any currently running tasks are suspended while the system is disabled, and they automatically resume when the system is subsequently enabled.

RAAD File Recovery

The following table describes the recovery procedure to use for each RAAD file.

File Name	Procedure
RAAD File	Restore the file from your most current backup and cycle CICS.

Catalog File	Restore the file from the most current backup. If you are also restoring the Data File, continue with it. If you need to recover only the Catalog File, ,then following the restore, run the batch utility program as shown below:
	`// EXEC CSIRAAD`
	`DISABLE`
	`RECOVER`
	`/*`
	`/&`
	`// JOB RECOVER2`
	`DLBL and EXTENTS as needed`
	`// EXEC CSIRAAD`
	`ENABLE`
	`/*`
	CSI recommends two VSE JOBs here, in case of a failure in the RECOVER process. The ENABLE is still performed since it is contained in a separate VSE JOB. This brings your system up, which can be helpful when resolving any problem with the RECOVER process.

Data File	Restore the file from the most current backup. Because this leaves your Catalog File and Data File(s) out of synch with each other, run a RECOVER process in the batch as soon as is practical.

Temporary File	Use IDCAMS to delete and redefine the file, then run the batch utility program as shown below:
	`// EXEC CSIRAAD`
	`DISABLE`
	`INITIALIZE RAADTFL`
	`ENABLE`
	`/*`
	After the Temporary File is initialized, cycle CICS and RAAD will execute without any problems.

Renaming the RAAD Files

You can easily rename the Catalog File, Data File(s), and/or Temporary File by entering the proper names into the RAAD Configuration Screen. If you need to rename the RAAD

File (RAADFIL) because of installation standards or file name conflicts, contact CSI Technical Support for assistance.

Using Multiple RAAD Data Files

You must have at least one Data File for RAAD. There is no upper limit to the number you can have. To use an additional Data File for RAAD, do the following:

1. Define the file using IDCAMS statements as shown below:

```
DELETE (raad.data.file) PURGE CLUSTER
DEFINE CLUSTER ( -
           NAME(raad.data.file) -
           RECORDSIZE(4088 4088) -
           SHR(2  )            -
           KEYS(16 0)          -
           VOLUMES(...) -
           NOREUSE -
           FREESPACE(15 10) -
           SPEED -
           RECORDS(... ...)           -
               ) -
       DATA    ( -
           NAME(raad.data.data) -
           CISZ(4096)              -
               ) -
       INDEX   ( -
           NAME(raad.data.index) )
```

2. Run the RAAD batch utility program:

```
// DLBL raadfl,'raad.data.file',,VSAM
// EXEC CSIRAAD
   INITIALIZE raadfl
/*
```

3. Define the file to CICS either in the FCT or through CEDA.
4. Install the group or cycle CICS to make the file available to RAAD.
5. Browse through the RAAD Catalog definitions, select the Group record for those Catalogs that you want to reference this new file, and key in the File Name on the Group Record Display. Remember to update the record after you have changed it.

RAAD DOC Queue

The RAAD DOC queue is a hierarchical file structure similar to that widely available on personal computers.

Individual directory and file names can be 48 bytes long plus an optional 1-8 character file name extension. File names can contain embedded spaces, but the first character must not be a space and any trailing spaces in the name are truncated. File names cannot contains either the slash ('/') or period ('.') characters. All other characters in the EBCDIC character set can be used.

The total length of the file name including its path cannot exceed 128 bytes.

The slash character ('/') is used as a directory separator, and the period ('.') is used to separate the file name from its extension.

This is a sample file hierarchy from the DOC Queue Display:

```
<DIR>TEST DIRECTORY ONE
<DIR>TEST DIRECTORY TWO.HDIR
   FILE 001.XTXT
   <DIR>TEXT FILES
      FILE 001.TXT
      FILE 003.TXT
<DIR>TEST DIRECTORY THREE
HELP.TOP
```

Directory entries are prefixed in the DOC Queue Display by "<DIR>." When a directory level is expanded, its contents are indented three spaces.

In the sample hierarchy above, "TEST DIRECTORY ONE," "TEST DIRECTORY TWO.HDIR," and "TEST DIRECTORY THREE" are all subdirectories of the ROOT directory. Directory "TEXT FILES" is a subdirectory of "TEST DIRECTORY TWO.HDIR" and its full path name is "/TEST DIRECTORY TWO.HDIR/TEXT FILES."

There are four files shown (in order as displayed in the hierarchy):

- /TEST DIRECTORY TWO.HDIR/FILE 001.XTXT
- /TEST DIRECTORY TWO.HDIR/TEXT FILES/FILE 001.TXT
- /TEST DIRECTORY TWO.HDIR/TEXT FILES/FILE 003.TXT
- /HELP.TOP

Deferred Purge

You can optionally specify Deferred Purge on individual RAAD Catalog Entries. See "RAAD Catalog Definition," page 40. If Deferred Purge is not specified, when a RAAD

report is deleted it is removed immediately from the RAAD dataset and VSAM space is instantly reclaimed for use by other reports. When Deferred Purge is specified, the following steps are taken:

- The RAAD report is marked as deleted but is not removed.
- The RAAD report is still accessible to users and still appears in the RAAD Queue Display.
- The report remains on the RAAD dataset until you run a special CSI-QCOPY process to handle the deferred deletions. This is accomplished by adding the keyword “DEFERRED” to the CSI-QCOPY Input sub-command as shown below:

```
TRANSFER -
  INPUT (RAD DEFERRED -
```

When you use this feature of CSI-QCOPY, RAAD sends all reports marked for Deferred Delete to CSI-QCOPY and RAAD ignores any additional Input selections.

Deferred deletions remain on the RAAD dataset unless you request their deletion in the QCOPY job step. See below for examples.

Using the Deferred Delete option and CSI-QCOPY allows you to archive critical reports onto tape using the ARCHIVE feature of CSI-QCOPY prior to actually deleting the reports from the RAAD dataset.

Examples

1. Access Deferred Deletions, write them to tape, and remove them from RAAD after processing.

```
TRANSFER -
  INPUT (RAD DEFERRED DELETE ) -
 OUTPUT ( ARCHIVE (FILENAME(RADARC/009) ) ) -
 OUTPUT ( DIRECTORY )
```

   All current reports marked for Deferred Delete on the RAAD dataset are written to a tape, TLBL “RADARC” on SYS009. A directory of the tape contents is produced as well. When processing is complete, all reports processed by this CSIQCOPY job are removed from the RAAD file.

2. Merge today’s Deferred Deletions with previous deletions.

```
TRANSFER -
  INPUT ( ARCHIVE (FILENAME(RADARC/008) ) ) -
  INPUT (RAD DEFERRED DELETE ) -
 OUTPUT ( ARCHIVE (FILENAME(RADARC/009) ) ) -
 OUTPUT ( DIRECTORY )
```

   First, previously deleted items are read from TLBL RADARC, SYS008, and copied to TLBL RADARC, SYS009. Next, as in example 1 above, all reports

currently marked as Deferred Delete are added to the tape. An output directory is also created, and finally, all reports processed in this CSIQCOPY job are deleted.

3. Create separate tapes for individual RAAD Groups.

```
; TRANSFER 1
         TRANSFER                                          -
           INPUT ( ARCHIVE (FILENAME(RADGP1/008) )  -
                   MERGE ( 901/A)                    -
                 )                                   -
           INPUT (RAD DEFERRED                       -
                   MERGE ( 901/A)                    -
                 )                                   -
          OUTPUT ( ARCHIVE (FILENAME(RADGP1/009) )  -
                   SELECT (COND (%GROUP EQ GRP1 ) ) -
                 )                                   -
          OUTPUT ( DIRECTORY )
; TRANSFER 2
         TRANSFER                                          -
           INPUT ( ARCHIVE (FILENAME(RADGP2/008) )  -
                   MERGE ( 936/A 901/A)              -
                 )                                   -
           INPUT (RAD DEFERRED DELETE                -
                   MERGE ( 936/A 901/A)              -
                 )                                   -
          OUTPUT ( ARCHIVE (FILENAME(RADGP2/009) )  -
                   SELECT (COND (%GROUP EQ GRP1     -
                                 GRP2 GRP3 GRP4 ) ) -
                 )                                   -
          OUTPUT ( DIRECTORY )
```

Here, you are running two tape-to-tape merges as illustrated in Example 2, with some additional sophistication. In this example, you are ordering the tape files by job name, field 901 in the MERGE operand. See the *CSI-QCOPY Installation and Operations Guide* for more information. In addition, the first TRANSFER processes only reports contained in Group "GRP1." The reports marked Deferred Delete are retained on the RAAD file.

The second TRANSFER merges the reports by Group (field 936) and job name (field 901) and selects any reports from groups "GRP1," "GRP2," "GRP3," or "GRP4." Following the second TRANSFER, all reports processed from RAAD are removed from the RAAD dataset.

New in This Release

The following changes are available beginning with release 1.2A

- Device Names were increased from four bytes to eight bytes in length. With eight bytes of space, you can choose more meaningful names for your printers. For example, assume that printer LP05 can be used in both portrait and landscape mode. You can then establish two devices for this printer, one with the necessary printer command for portrait mode printing and the other for landscape printing and name them:
  - LP05PORT for portrait mode printing, and
  - LP05LAND for landscape mode printing.
- Online help is now available for all RAAD screens.
- Support for the DOC queue was added.
- A Return To Program capability was added to better interface with user-written menu systems.
- Several bugs were fixed.

Using the RAAD Transaction

All interfacing with RAAD is done through a single CICS transaction named “RAAD.” All actions, customization, control, and everyday use are done through this single transaction.

RAAD CICS Screens

```
RAAD004            RAAD: User Definition    List                    11/20/03
CMD: ____________________                                           07:06:42
CMD NAME              DESCRIPTION
--- ----------------- ------------------------------------------------------
_   $SYS               RAAD System Administrator
_   BIM                CSI/BIM USER
_   DAVE2              RAAD System Administrator
_   USER               TEST RAAD USER
                    F3:Quit 4:Return 7:Bwd 8:Fwd  12:Stack
                   COPYRIGHT 2002, CONNECTIVITY SYSTEMS INC.
```

RAAD CICS Screens all have the same general format. The User Definition List shown above illustrates the general screen layout.

The screen ID is found in the upper left-hand corner (in the sample above, this is “RAAD004”). The current date and time can be found in the upper right corner of the screen. In the top center of the display is found a one or two line screen description. In the sample above, this is one line, “RAAD: User Definition List.”

Most of the screens contain a screen command. This is found in the second line of the display and headed with “CMD:.“

At the bottom of the screen is the copyright notice, and right above it is a summary of the available PF keys. This line is also used for edit error messages that are displayed as they occur.

General PF Keys

Several of the PF keys work the same regardless of the RAAD screen you are currently viewing:

PF Key	Label	Description
PF1	Help	Displays RAAD online help information.
PF3	Quit	Exits RAAD immediately and presents you with an empty CICS screen.

PF Key	Label	Description
PF4	Return	Returns you to the preceding RAAD screen. For example, if you press PF4 from the User Definition List shown above, you return to the RAAD System Menu.
PF12	Stack	Allows you to return to a previously accessed screen. As you navigate through the various RAAD screens, a program stack is maintained by the RAAD system. You can always return to the previous screen by repeatedly pressing PF4, or you can use the RAAD stack and select the entry to which you want to go. See “RAAD Stack,” page 22.

If you prefer, you can also enter the command itself in the ”CMD:” line at the top of the screen. For example, either you can press PF4 or you can type “RETURN” in the “CMD:” line to return to the preceding screen.

The detail edit screens support an additional command on the command line: “DEL.” You can use the “DEL” command to delete the current record from the RAAD dataset.

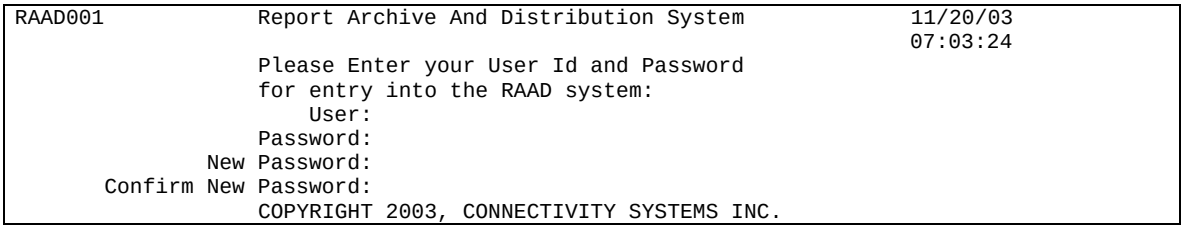
RAAD screens function on Model 2 (24x80) 3270 display devices. When appropriate, RAAD attempts to switch to an alternate screen size, if one is available, to present more information on the screen. For instance, for displays containing lists of information, RAAD changes to the alternative 3270 screen size to display more list entries on a single 3270 screen.

RAAD Stack

```
RAAD002            Report Archive And Distribution System
                                Program Stack
                ITEM DESCRIPTION
                ---- ---------------------------------------
                0001 RAAD INITIAL SIGNON
                0002 RAAD INITIAL MENU
                0003 RAAD LIST: USER DEFINITION
                             PF3:Quit  PF4:Return
                   COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.            1.0A
```

The RAAD Program Stack display shows the steps that got you to the current screen. To quickly go back to a preceding display, position the cursor on the line corresponding to the RAAD function you want to perform, and press ENTER.

RAAD Sign On



Before you can access any of the RAAD features, you must first sign on to RAAD using a User ID and Password. Your System Administrator provides your User ID and Password to you. When entered, the Password is not displayed.

Depending on your installation settings, you may be able to bypass entering User ID and Password and only press ENTER when presented with the RAAD Sign On screen. Contact your System Administrator for more information.

You can change your password at any time by entering both the old or existing password, and the new Password. Enter the new Password twice, once for "New Password" and once for "Confirm New Password." Your new Password will not be displayed on the screen.

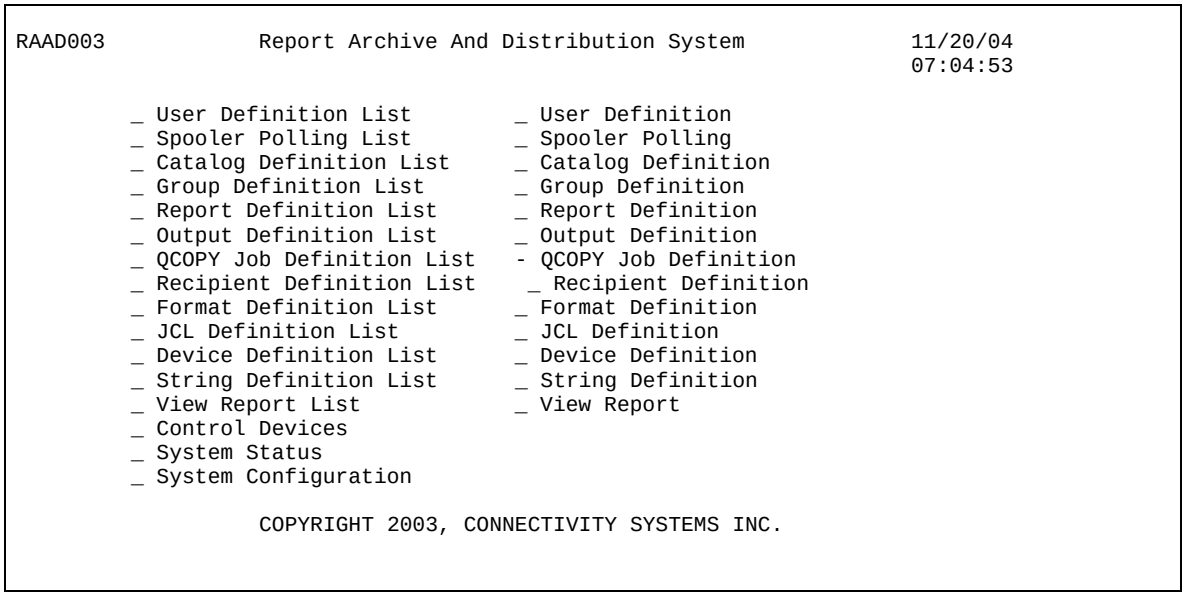
Passwords can be one- to eight-characters long and can consist of the following in any combination:

Alpha characters: A-Z, case insensitive (a-z)	Period (,)	Semi colon (;)	Asterisk (*)
Digits: 0 through 9	Vertical bar (|)	Colon (:)	Single quote (‘)
Character space	Greater than (>)	Plus sign (+)	Double quote (“)
Comma (,)	Less than (<)	Equal sign (=)	Slash (/)
Exclamation point (!)	Pound sign (#)	Percent sign (%)	Question mark (?)
At sign (@)	Dollar sign ($)	Ampersand (&)	Dash (-)
Right bracket (})	Left bracket ({)		

If you forget your Password, the System Administrator can either tell you what it is or assign you a new Password at the Administrator's option.

After you enter the User ID and Password, press ENTER to proceed to the RAAD System Menu.

RAAD System Menu



The RAAD System Menu shows the functions of RAAD that you are authorized to perform. The example screen above shows all the functions present in RAAD.

For some of the menu entries, two options are available:

- The left entry presents a list of the function items
- The right entry presents you with the detail screen for the first entry in the list.

The list you see may be different. Contact the System Administrator for more information.

In the event that the System Administrator has authorized you for only a single RAAD function, the menu is skipped and you are presented with the one function for which you are authorized.

The individual menu entries shown on the screen are:

RAAD Menu List Entry	RAAD Menu Entry	Function
User Definition List	User Definition	Maintain RAAD User Information
Spooler Polling List	Spooler Polling	Maintain Spooler Polling Information
Catalog Definition List	Catalog Definition	Maintain the RAAD Catalog
Group Definition List	Group Definition	Maintain the RAAD Groups
Report Definition List	Report Definition	Maintain Report Definitions

RAAD Menu List Entry	RAAD Menu Entry	Function
Output Definition List	Output Definition	Maintain Output Definitions
QCOPY Job Definition List	QCOPY Job Definition	Maintain QCOPY Job Definitions
Recipient Definition List	Recipient Definition	Maintain Recipient Definitions
Format Definition List	Format Definition	Maintain Format Definitions
JCL Definition List	JCL Definition	Maintain JCL Decks
Device Definition List	Device Definition	Maintain RAAD Devices
String Definition List	String Definition	Maintain RAAD Printer Strings
View Report List	View Report	View Reports in RAAD
	Control Devices	Control RAAD Devices
	System Status	RAAD System Status Display
	System Configuration	RAAD System Configuration

Each of these menu entries is described in detail below.

To select a menu entry, position the cursor on the relevant line on the screen and press ENTER.

RAAD List Display

```
RAAD004            RAAD: User Definition    List                    11/20/03
CMD: ____________________                                           07:06:42
CMD NAME              DESCRIPTION
--- ---------------- ------------------------------------------------------------
_   $SYS              RAAD System Administrator
_   BIM               CSI/BIM USER
_   DAVE2             RAAD System Administrator
_   USER              TEST RAAD USER
                     F3:Quit 4:Return 7:Bwd 8:Fwd  12:Stack
                    COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

There are several lists available in RAAD. Each list is displayed using the screen shown above. The example screen shows the RAAD User Definition List.

The exact contents of the “NAME” and “DESCRIPTION” columns vary depending on the list that is being processed.

For each entry in the list, two commands are available. These commands are entered on the individual line items.

- E—Edit the entry
- D—Delete the entry.

You can also edit an entry by positioning the cursor on the line and pressing ENTER.

Use PF7 and PF8 to scroll the list backward and forward respectively.

RAAD User Profile Definition

User Profile Access Entry

```
RAAD005A           Report Archive And Distribution System            11/27/03
CMD: ____________________ User Profile: Access Entry                  12:47:37
    User: $SYS_____________ Desc: RAAD System Administrator____________________
Password: $SYS____          Exit: _________ Queue: No  Prtr: No  Cmd: No
Printers: ________ ________ ________ ________
                                    Dflt     ------- PRINT COMPLETION --------
      Classes                       Clas Alt Act C D P REM Node     User   Sys
Y ARC ALL_____________________________ ALL_ Yes Lve _ _ _ 000 _________ ________ _
Y LST ALL_____________________________ ALL_ Yes Lve _ _ _ 000 _________ ________ _
Y PUN ALL_____________________________ ALL_ Yes Lve _ _ _ 000 _________ ________ _
Y RAD ALL_____________________________ ALL_ Yes Lve _ _ _ 000 _________ ________ _
Y RDR ALL_____________________________ ALL_ Yes Lve _ _ _ 000 _________ ________ _
Y SPL ALL_____________________________ ALL_ Yes Lve _ _ _ 000 _________ ________ _
Y VML ALL_____________________________ ALL_ Yes Lve _ _ _ 000 _________ ________ _
Y VMP ALL_____________________________ ALL_ Yes Lve _ _ _ 000 _________ ________ _
Y VMR ALL_____________________________ ALL_ Yes Lve _ _ _ 000 _________ ________ _
Y XMT ALL_____________________________ ALL_ Yes Lve _ _ _ 000 _________ ________ _
N DOC                               No
Queue Commands: A D V O R P /       System Cmd (Y/N): Y
PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 9:Restrict 10:Togl 11:PFkey 12:Stack
                  COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

Establish a User Profile for each individual RAAD user. For each user, you can authorize queues and classes; define processing for Print Completion, Delete, and Release commands; determine the menu entries and the RAAD functions available for this user; establish PF keys for the user; and fine tune the user's access to queued reports. This requires several screens to maintain all of the information.

The first screen in the User Profile is the "Access Entry" screen, shown above. The three lines at the top contain the following fields:

Field	Description
User	User ID can be from 1 to 16 characters in length and must begin with a non-blank value. User ID can contain imbedded blanks. Names beginning with '$' are reserved for CSI use.
Desc	Free-form text description for this user.
Password	Password can be one to eight characters long and can consist of the characters A-Z, 0-9, space, comma, ., |, <, >, ;, :, +, =, !, @, #, $, %, &, *, (,), ', ", /, ?, -, }, or { in any combination. The password is encrypted on the file and cannot be readily decoded by examination of a hexadecimal dump of the record.

Field	Description
Exit	Name of the user written CICS command-level program for security exit processing.
Queue	Yes/No switch that specifies whether to process the Queue Display Line Item Authorization Exit point.
Prtr	Yes/No switch that specifies whether to process the Printer Authorization Exit point.
Cmd	Yes/No switch that specifies whether to process the Command Authorization Exit point.
Printers	Up to four printers can be specified for the user. If you do not specify a printer, the user is allowed to use any printer known to RAAD. If you specify one or more printers, then the user is only allowed to use one of the printers specified in the list. Printers must also be defined in the Printer Definition process. See "RAAD Printer Definition," page 71.

The following information can be specified for each of the queues that are available in RAAD:

Field	Description
Y/N	To the left of the queue name is a Yes/No flag. Specify "N" to prevent access to the queue.
Classes	You can specify individual classes or use the reserved word "ALL" to allow access to all of the classes for this specific queue. **Note:** The field is not long enough to hold all 36 POWER classes (A-Z, 0-9). If this poses a problem, specify "ALL" for classes and enter the appropriate number of Excludes (see Restrictions below) to properly restrict access.
Dflt Class	You can specify four different classes or use the reserved word "ALL" to indicate all classes. This is used when no classes are given on the "View Reports" display See "RAAD View Report(s)," page85, for more information
Alt	Yes or No indicating whether the user can alter reports in this queue.

The remaining fields on each line are processed the same way but can refer to either "Print Completion," "Delete," or "Release" commands. Use PF10 (TOGGLE) to shift between the three different settings.

- "Print Completion" defines the processing RAAD takes when the user elects to print the report
- "Delete" defines the action RAAD takes when the Delete command is issued in the RAAD Queue Display

- "Release" defines the action RAAD takes when the Release command is issued on the Queue Display

For each of these, the following options are available:

Field	Description
Act	Action can be: • "Del" for delete • "Lve" for leave as is • "Dsp" for Power disposition control ("D"{print and delete}becomes "H" {hold}, "K" {print and keep} becomes "L"{leave}) • "Alt" for alter If "Alt" is specified, the remaining fields on the line are processed. Otherwise, they are ignored.
C	Class for alterations.
D	Disposition for alterations.
P	Priority for alterations.
REM	Remote ID for alterations.
Node	Destination Node for alterations.
User	Destination User for alterations.
Sys	Sysid for alterations.

At the bottom of the screen, the actual line-item commands used in the RAAD Queue Display can be customized. Here there are eight positional fields referred to respectively:

Field	Description
A	Alter command in the RAAD Queue Display
D	Delete command in the RAAD Queue Display
V	View command in the RAAD Queue Display
O	Output command in the RAAD Queue Display
R	Release command in the RAAD Queue Display
P	Print command in the RAAD Queue Display
/	Position command in the RAAD Queue Display

Field	Description
System Cmds	The Yes/No setting refers to two line commands in the RAAD Queue Display: F Force close a currently open RAD queue report X Force delete a currently open RAD queue report It may be preferable to restrict the use of these commands to an administrator or selected users because indiscriminate use of them can cause problems in RAAD.

PF Keys and Commands

PF Key	Label	Description
PF5	Update	Update the User Profile on the RAAD File
PF6	Add	Add a new User Profile to the RAAD File. **Note:** Add does not include the User Profile Restriction Entries. See "Restrictions Display," page 30. If you want to keep the Restriction Entries, you must enter the "COPY" command in the "CMD:" line.
PF7	Bwd	Scroll to the preceding User Profile. Any changes you have made will be lost unless you have previously updated them.
PF8	Fwd	Scroll to the next User Profile. Any changes you have made will be lost unless you have previously updated the record.
PF9	Restrict	Proceed to the Restriction Display, page 30.
PF10	Toggle	Toggle among the "Print Completion," "Delete," and "Release" options.
PF11	PFkey	Proceed to the PF Key Display. See "PF Key Display," page 30, below.
None	Copy	Makes a copy of this User Profile, including all of the Restriction Entries. This differs from the Add command, which does not copy the Restriction Entries.

PF Key Display

```
RAAD005C           Report Archive And Distribution System
CMD: _____________________ User Profile: PF Keys
    User: ________________ Desc: ________________________________________________
          PF1: _________________   PF13: _________________
          PF2: _________________   PF14: _________________
          PF3: QUIT                PF15: _________________
          PF4: RETURN              PF16: _________________
          PF5: _________________   PF17: _________________
          PF6: _________________   PF18: _________________
          PF7: BWD                 PF19: _________________
          PF8: FWD                 PF20: _________________
          PF9: _________________   PF21: _________________
         PF10: LEFT                PF22: _________________
         PF11: RIGHT               PF23: _________________
         PF12: STACK               PF24: _________________
                        PF3:Quit 4:Return 12:Stack
                   COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

These PF keys apply to the RAAD View Display only. You cannot change the following PF keys:

- PF3
- PF4
- PF7
- PF8
- PF10
- PF11
- PF12

All other PF keys can be modified to suit your needs. You can enter any valid command for the RAAD View Display for any of the modifiable PF keys.

Restrictions Display

```
RAAD005B           Report Archive And Distribution System
CMD: _____________________ User Profile: Restrictions
    User: $SYS_____________ Desc: RAAD System Administrator____________________
Menu Choices (Y/N):
Y User Definition      Y Spooler Polling      Y Catalog Definition
Y Report Definition    Y Output Definition    Y Recipient Definition
Y Format Definition    Y JCL Definition       Y Printer Definition
Y View Report          Y Control Printers     Y System Status
Y System Configuration
Access Restrictions:    NONE DEFINED
C X QUE C D P NAME     GROUP    REM USERINFO         DEST.NOD DEST.USR FORMAT
- - --- - - - -------- -------- --- ---------------- -------- -------- -------
_ _ ___ _ _ _ ________ ________ ___ ________________ ________ ________ ________
_ _ ___ _ _ _ ________ ________ ___ ________________ ________ ________ ________
_ _ ___ _ _ _ ________ ________ ___ ________________ ________ ________ ________
_ _ ___ _ _ _ ________ ________ ___ ________________ ________ ________ ________
_ _ ___ _ _ _ ________ ________ ___ ________________ ________ ________ ________
_ _ ___ _ _ _ ________ ________ ___ ________________ ________ ________ ________
_ _ ___ _ _ _ ________ ________ ___ ________________ ________ ________ ________
_ _ ___ _ _ _ ________ ________ ___ ________________ ________ ________ ________
              PF3:Quit 4:Return 5:Update 7:Bwd 8:Fwd 12:Stack
                  COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

This screen is in three parts. At the top, the User and Desc fields from the User Profile are displayed as a reminder of which User Profile is being processed.

Below that, are a series of Yes/No flags for the various menu entries found on the RAAD System Menu. Enter a 'Y' to allow the user to use this RAAD function, or an 'N' to disallow the function. Only those menu entries flagged with a 'Y' are shown to the user with this User Profile.

You can use the bottom half of the screen to fine tune the user's access to Queue information in the RAAD Queue Display. In the User Profile: Access Entry described above, you were able to restrict users to individual queues and classes. Here you can further restrict users by using one or more of following characteristics: class, disposition, priority, name, group, remote, user information, destination node, or destination user. In addition, you can optionally specify a format to cause RAAD to reformat the report to your specifications when viewed or printed by this user.

There are three types of entries that can be specified:

(**I**)nclude	Defines the characteristics of the report(s) that are shown to the user. If one or more Include entries exist, then only those reports matching one of the Includes are shown.
e(**X**)clude	Defines the characteristics of the report(s) that are not shown to the user. All reports not matching one of the Excludes are displayed.
(**V**)iew	Used to define a format for a specific report or reports. It is not used in the selection process.

You can have as many of each type as needed to fully qualify this user. You can mix Includes and Excludes freely, as long as you remember that if one or more Includes are given, then only matching reports are shown to the user.

RAAD organizes these entries into Includes, followed by Excludes, followed by Views. When performing its Format check, RAAD first checks theView entries for a match and then checks the Include entries. In that way, a format can be applied to both the Include and View records and RAAD responds appropriately. See the example below for an illustration of this capability.

For each line in the lower part of the screen, 12 fields can be specified:

Field	Description
C	Command can be 'A' for add, or 'D' for delete. If omitted, RAAD assumes you are editing the current information on the line.
X	I for Include, X for Exclude or 'V' for View. This field must be specified.
QUE	Optional indication of Queue for this line item.

Field	Description
C	Optional indication of Class for this line item.
D	Optional indication of disposition for this line item
P	Optional indication of priority for this line item
NAME	Optional Job Name for this line item. Job Name can be generic.
GROUP	Optional Group for this line item. Group is relevant for ARC and RAAD queues only and is ignored for all others. Group can be generic.
REM	Optional indication of Remote ID for this line item.
USERINFO	Optional indication of User Info for this line item. User Info can be generic.
DEST.NODE	Optional indication of Destination Node for this line item. Destination Node can be generic
DEST.USR	Optional indication of Destination User for this line item. Destination User can be generic.
FORMAT	Optional name of RAAD Format definition used whenever this user accesses a report matching these characteristics. Format is ignored on an Exclude line.

Changes made to the line items are not stored on the RAAD file until the PF5 key is pressed or “UPDATE” is entered in the “CMD:” line.

PF7 and PF8 scroll the line item list, rather than scroll backward or forward through the User Profiles.

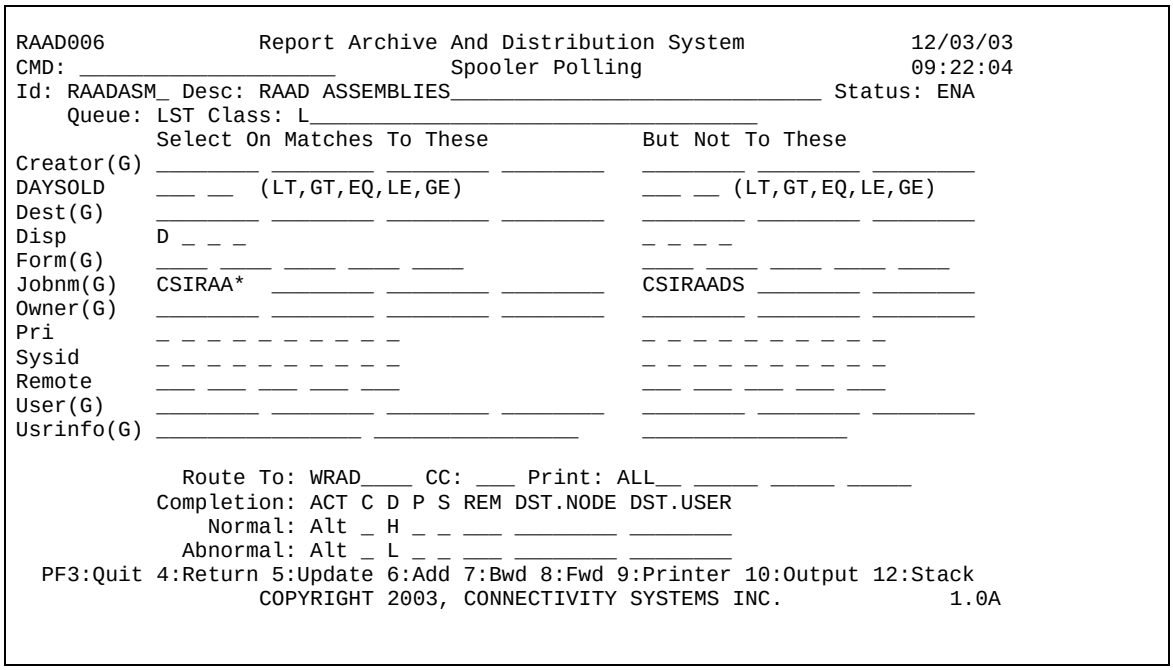
EXAMPLE:

```
C X QUE C D P NAME     GROUP    REM USERINFO         DEST.NOD DEST.USR FORMAT
- - --- - - - -------- -------- --- ---------------- -------- -------- --------
_ I LST _ _ _ RA*_____ _________ ___ ________________ _________ _________ _________
_ I LST _ _ _ GA4677__ _________ ___ ________________ _________ _________ _________
_ X LST _ _ _ RA42*___ _________ ___ ________________ _________ _________ _________
_ I RAD _ _ _ _________ RADEP___ ___ ________________ _________ _________ DEPRPT__
_ V ___ _ _ _ RA4344__ _________ ___ ________________ _________ _________ 4344REC_
```

In this example, you are including only LST jobs that are prefixed by “RA” or job “GA4677,” but you are not including any jobs beginning with “RA42.” In addition, for report “RA4344” you are using the defined Format “4344REC.” For the RAD queue, you are including reports from group “RADEP” only and for all of them, the Format named “DEPPRT” is used.

Note: In this example, if job "RA4344" is found in the RAD queue, the "4344REC" Format is used because the View entry does not specify a QUE. If this is not what you want, then you must specify a QUE on the View line for job "RA4344."

RAAD Power Polling Definition



RAAD periodically scans the Power Queues looking for jobs to process. This screen allows you to manage the queues and jobs that are processed by RAAD.

The screen is composed of three parts:

- **Identification**—Allows you to identify each individual Polling Definition uniquely.
- **Selection**—Used to specify which job or jobs are identified by this individual Polling Definition. There are several fields available for this selection process. See below.
- **Processing**—How the job is processed after it has been selected.

Identification

Field	Description
ID	Eight character unique ID for Polling Definitions. ID can contain any characters including embedded spaces, but must begin with a non-blank character. IDs beginning with '$' are reserved for CSI use.
Desc	Free form text description of this Polling Definition.

Selection

These fields are used to specify optional selection criteria RAAD uses in determining which reports are Automatically Routed.

Any combination of fields can be specified. For each of the selection fields, you can specify whether a report must or must not match the selection. You can accomplish this by specifying the selection data under the appropriate columns:

"Select On Matches To These"

Or

"But Not To These".

For each of these columns, a list of one or more selection data items can be entered for each selection field. If more than one data item is specified for a single selection field, a match with any one data item will match the selection field for that column.

The selection criteria defined in the above sample screen selects reports that meet the following criteria:

- Contained in the POWER LST Queue
- Class of L
- Disposition of D
- Jobname starting with the characters "CSIRAA"
- But not the job named "CSIRAADS."

The following table defines each Report Selection Field. Some of the fields can be specified as generic values. These fields are shown on the display with a "(G)" following the field name. Generic data values can contain an asterisk (*) to mean "any number of characters," or a plus sign (+) to mean "any single character." These are the same formats and rules used for generic values in the CICS "CEMT" transaction. The Number of Values column in the keyword table defines the maximum number of values that can be specified for each selection field. On the display, there is a separate location for each data value. The contents of some of the selection fields vary depending on the Spool Queue in which the report is created. The following codes are used in the Spool Queue column in the keyword table to indicate which Spool Queue the report is from

- VM=VM Spool Queues

- PWR=POWER Spool Queues
- SPL=RAAD online Spool Queue

Selection Field	Generic	Number of Values	Spool Queue	Description
CREATOR	Yes	4	VM	Report Creator
			PWR	Originating Node
			SPL	CICS terminal ID and tran ID that created the report
DAYSOLD *nnn cmp*	No	n/a	All	Number of days since report was created. *cmp* is the compare type (LT,GT,EQ,LE, and GE) and *nnn* is the number of days.
DEST	Yes	4	VM	Distribution Code
			PWR	Destination Node
			SPL	Destination Node
DISP	No	4	VM	Report Disposition (D or H)
			PWR	Report Disposition (D, H, K, or L)
			SPL	Report Disposition (D, H, K, L)
FORM	Yes	4	All	Report Forms ID
JOBNM	Yes	4	All	Report/Jobname
OWNER	Yes	4	VM	Report owner
			PWR	Originating User ID
			SPL	Owner from SPL Parameter
PRI	No	10	All	Report Priority (0-9) (VM is forced to 1)
SYSID	No	10	VM	Not Used
			PWR	Report's SYSID (0-9)
			SPL	Not Used
REMOTE	No	5	VM	Not Used
			PWR	Report ID
USER	Yes	4	VM	Not Used
			PWR	Destination User ID
			SPL	User ID from SPL Parameter

Selection Field	Generic	Number of Values	Spool Queue	Description
USERINFO	Yes	1	VM PWR SPL	Not Used USER= from POWER Job USRINFO from SPL Parameter

Processing

Selected reports can either be printed or used as a trigger to cause RAAD to generate a RAAD Output. See “RAAD Output Definition,” page 57, for more information. To indicate the processing, specify one of the following:

Field Name	Specifies the ID of …
Route To	The RAAD Printer used to print the selected report. This Printer must be defined for RAAD. See “RAAD Printer Definition,” page 71). The reserved word “NONE” can be used as a Route To ID. “NONE” indicates no printing but requests RAAD to perform the action specified by Normal Completion for this Polling Definition. You can use “NONE” to provide for automated cleanup of the Spooler Queues.

When you specify a Route To value, additional processing can also be requested. The RAAD system ignores additional fields when you specify the Generate value.

Field	Description
CC	Copy count-By default RAAD prints a single copy of the report. In this field, you can specify the number of copies for RAAD to print.
Print	These four fields are used to specify a range of pages/lines to be printed, or only the first or last lines/pages of a report to be printed. The following Formats can be specified: • PRINT-ALL • PRINT-LAST *nnnnn* PAGES • PRINT-LAST *nnnnn* LINES • PRINT-FIRST *nnnnn* PAGES • PRINT-FIRST *nnnnn* LINES • PRINT-PAGES *nnnnn* THRU *nnnnn* • PRINT-LINES *nnnnn* THRU *nnnnn* If omitted, the entire report is printed.

Completion Processing

The Completion Processing fields specify the action for RAAD to take after the report has been routed. If Normal Completion is omitted, RAAD by default, alters the report to class 'Z'. The NORMAL fields provide the options for altering or deleting the report after it has been routed successfully. The ABNORMAL fields provide the options for altering the report if an error prevents the report from being routed (such as a hardware error on the printer or a missing FCB.)

In choosing values for the NORMAL and ABNORMAL fields, be sure to select values that will never be used for Spooler Polling; otherwise, the report could be printed repeatedly.

Field	Description
ACT	Specifies whether the report is deleted, altered, or left as-is. One of the following values can be specified: • DEL—The report is deleted. • DSP—The report is altered or deleted depending on its disposition. Reports with a disposition of "D" are deleted. Reports with a disposition of "K" are altered to a disposition of "L." • ALT—The report is altered to the values specified in the remaining fields. • LEV—The report is left as is in the queue. Specify the LEV option only for ABNORMAL processing. If you specify the LEV option for NORMAL processing, the report prints repeatedly until it is deleted from the queue through some other means.
C	Used with ALT to specify the class to which the report is altered. If left blank, the class is not changed.
D	Used with ALT to specify the disposition to which the report is altered. If left blank, the disposition is not changed.
P	Used with ALT to specify the priority to which the report is altered. If left blank, the priority is not changed.
S	Used with ALT to specify the SYSID to which the report is altered. If left blank, the SYSID is not changed.
REM	Used with ALT to specify the Remote ID to which the report is altered. If left blank, the Remote ID is not changed.
DEST	Used with ALT to specify the POWER Destination Node to which the report is altered. If left blank, the Destination Node is not changed.
USER	Used with ALT to specify the POWER Destination User to which the report is altered. If left blank, the Destination user is not changed.

PF Keys

PF Key	Label	Description
PF5	Update	Update the Polling Definition on the RAAD File.
PF6	Add	Add a new Polling Definition to the RAAD File.
PF7	Bwd	Scroll to the preceding Polling Definition. Any changes you have made will be lost unless you have previously updated the record.
PF8	Fwd	Scroll to the next Polling Definition. Any changes you have made will be lost unless you have previously updated the record.

PF Key	Label	Description
PF9	Printer	Proceed to the list of Printers defined to RAAD
PF10	Output	Proceed to the list of Outputs defined to RAAD.

RAAD Catalog Definition

```
RAAD007A           Report Archive And Distribution System            12/03/03
CMD: _____________________        Catalog Definition                 12:44:16
         Id: BIMFSTR_ Desc: BIM F STAR TEST_
  Selection:
   Job Name: BIMF*___ Queue: LST Cls: R Dsp: _ Pri: _ Rem: ___ Sys: _ Form ____
  Orig Node: _________ Dest Node: _________ User Info: ________________
  Orig User: _________ Dest User: _________
Disposition:
 Group Name: BIMCPPF_  Deferred Purge: No  (Yes/No)
      Generations: 000 Retention: 0003 Exp.Date: __________ By Job Name: No
 Completion: ACT C D P S REM DST.NODE DST.USER
     Normal: Dsp _ _ _ _ ___ _________ _________
   Abnormal: Alt _ L 2 _ ___ _________ _________
        PF3:Quit 4:Return 5:Update 6:Add 7:Bwd 8:Fwd 9:Group 12:Stack

                  COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.             1.0A
```

Use this screen to define how reports are stored on the RAAD dataset. The information on this screen is referenced when:

- A report is encountered using the External Device Writer Interface
- A report is written to RAAD using CSIQCOPY in a batch partition
- A report is written to RAAD using a Writer. See “RAAD Printer Definition,” page 71, for more information.

This screen is composed of four parts:

- Identification
- Selection
- Disposition
- Completion

Identification

Field	Description
Id	This is the unique entry ID for this catalog. ID is eight characters long and can contain any character including embedded spaces. The first character must be non-blank.
Desc	Optional free form text description to further identify this Catalog Entry.

Selection

These fields are used to identify which report or reports are to be governed by this Catalog. The selection fields are:

Field	Description
QUEUE	Source Spool Queue—Use one of these: LST, PUN, RDR, XMT, VML, VMR, VMP, or SPL. **Note:** The POWER External Device Writer processes only the LST Queue. Use either CSIQCOPY or RAAD Writers to process any of the other Spool Queues.
JOB NAME	Spooler Job name—Generic processing (“*” or “+”) can be used when defining this field.
CLS	Spooler job class.
DSP	Spooler disposition.
PRI	Spooler priority.
REM	POWER remote ID.
SYS	POWER sysid.
FORM	Forms number
ORIG NODE	POWER origin node—Generic processing (“*” or “+”) can be used when defining this field.
ORIG USER	POWER origin user—Generic processing (“*” or “+”) can be used when defining this field.
DEST NODE	POWER destination node—Generic processing (“*” or “+”) can be used when defining this field.
DEST USER	POWER destination user—Generic processing (“*” or “+”) can be used when defining this field.
USER INFO	POWER user information field from * $$ LST card. Generic processing (“*” or “+”) can be used when defining this field.

Specify only those fields that are needed to uniquely identify the input report. For example, if class is irrelevant for this catalog, do not enter any value in the CLS field.

Disposition

There are several fields relating to the disposition of the report after it is matched to the selection data above:

Field	Description
GROUP NAME	Enter the Group for this report.
DEFERRED PURGE	Yes/No flag, which controls the way RAAD processes reports associated with this catalog. If 'NO' is specified, the report is deleted immediately by either the Daily Purge process or when requested by a user. If 'YES' is specified, the report is not deleted immediately. Instead RAAD moves the report to the reserved group "$PURGE". Using CSIQCOPY, you can save these reports to tape prior to their physical remove from the RAAD dataset. See "Deferred Purge," page 17, for more information.
GENERATIONS	Enter the number of generations of this report that you wish to keep on the Archive Dataset.
RETENTION	You can optionally specify the number of days that the report remains on the RAAD Dataset.
EXP. DATE	You can optionally enter a date when the report will no longer be needed. If you want the report retained on the RAAD Dataset forever, then enter "PERM" into this field.
BY JOB NAME	If YES is specified, the number of GENERATIONS applies to each unique JOB NAME within the GROUP. If 'NO' is specified, the number of GENERATIONS applies to the entire GROUP. **Note:** The "By Job Name" option is only available if retention is by generation, it is ignored otherwise.

Prior to purging reports from the Archive Dataset, three of the preceding fields must be satisfied:

- The number of generations currently on the file must exceed that entered in the catalog
- The retention period must be expired
- Any expiration date is also validated.

Completion

These fields control how the RAAD External Device Writer handles input POWER Queue entries. There are two types of completion processes:

- NORMAL—The report was successfully archived to the Archive Dataset.

- ABNORMAL—The report was not archived.

Several things can go wrong in the External Device Writer process. Not all of them indicate errors in RAAD. Abnormal completion is used when

- A VSAM error of some kind occurs (NO SPACE FOUND, for example).
- The console operator terminated the External Device Writer using the POWER "PSTOP" or "PFLUSH" Commands.
- An internal error occurred within RAAD. RAAD issues a message detailing the reason for the abnormal processing on the RAAD Log and depending on severity, the VSE System Console as well.

For each completion type, you can enter eight fields.

Field	Description
ACT	Specifies whether the report is deleted, altered, or left as-is. One of the following values can be specified • DEL—The report is deleted. • DSP—The report is altered or deleted depending on its disposition. Reports with a disposition of "D" are deleted. Reports with a disposition of "K" are altered to a disposition of "L." • ALT—The report is altered to the values specified in the remaining fields. • LEV—The report is left as is in the queue. **Note:** Specify the LEV option only for ABNORMAL processing. If you specify LEV for NORMAL processing, the report prints repeatedly until it is deleted from the queue through some other means.
CLS	Used with ALT to specify the class to which the report is altered. If left blank, the class is changed.
DSP	Used with ALT to specify the disposition to which the report is altered. If left blank, the disposition is not changed.
PRI	Used with ALT to specify the priority to which the report is altered. If left blank, the priority is not changed.
SYS	Used with ALT to specify the SYSID to which the report is altered. If left blank, the SYSID is not changed.
REM	Used with ALT to specify the Remote ID to which the report is altered. If left blank, the Remote ID is not changed.
DEST	Used with ALT to specify the POWER Destination Node to which the report is altered. If left blank, the Destination Node is not changed.

Field	Description
USER	Used with ALT to specify the POWER Destination User to which the report is altered. If left blank, the Destination user is not changed.

PF Keys

PF Keys	Label	Description
PF5	Update	Update the Catalog Definition on the RAAD File.
PF6	Add	Add a new Catalog Definition to the RAAD File.
PF7	Bwd	Scroll to the preceding Catalog Definition. Any changes you have made will be lost unless you have previously updated them.
PF8	Fwd	Scroll to the next Catalog Definition. Any changes you have made will be lost unless you have previously updated the record.
PF9	Group	Proceed to the Group Display.

RAAD Group Definition

```
RAAD007B          Report Archive And Distribution System            11/20/03
CMD: _____________________          Group Definition                  07:18:5
  Group: RAADASM_ Description: _________________ File Name: ________
  Display Sort Sequence: JNM A  Choose From: CLS - Job Class
                         FDT A               DES - Description
                         FTM A               DND - Dest. Node
                         ___ _               DSP - Job Disposition
                         ___ _               DUS - Dest. User
                         ___ _               FCB - Rrport FCB
                         ___ _               FDT - File Date
                         ___ _               FRM - Forms Id
                                             FTM - File Time
                                             JNM - Job Name
                                             JNO - Job Number
                                             JSF - Job Suffix
                                             OND - Orig Node
                                             OUS - Orig User
                                             PRI - Job Priority
                                             SYS - Job Sysid
                                             USR - User Information
                       PF3:Quit 4:Return 5:Update
                  COPYRIGHT 2002, CONNECTIVITY SYSTEMS INC.            1.0A
```

RAAD stores reports on the RAAD dataset by Group. Each Catalog must point to a Group Definition. The Group Record controls the sequence of individual reports that are archived within a particular Group Name and the individual VSAM file where the detail data are stored, if other than RAADFIL.

Field	Description
Group	The name of the Group. The Group name is eight characters long and can include any character including embedded spaces. The first character must be non-blank. **Note:** Names beginning with '$' are reserved for CSI use.
Description	Free form text description that you can add to each group to further define the purpose of the group.
File Name	The name of the VSAM Data File into which RAAD places the archived reports for this group. The default is the System Data File (RAADFIL)

You can modify the sort sequence of Group by keying the three-character keyword as shown along the right hand side of the screen. For each key entry, there are two fields:

- The first contains the keyword from the list on the screen
- The second is either "A," for ascending (default), or "D," for descending, sequence.

Up to eight fields can be specified in the sort key.

Note 1: Changes to the sorting sequence of a Group do not affect reports that are already archived in the Group. The new sequence affects only reports that are added to the Group after the change has been made.

Note 2: When initially installed, RAAD creates four groups on the RAAD file: $DAILY, $LOG, $PURGE and $SPL. These groups are used for internal RAAD functions and should not be altered.

RAAD Report Definition

```
RAAD008A           Report Archive And Distribution System             11/20/03
CMD: ____________________     Report Definition                       07:19:34
 Report: RAAD001_ Desc: RAAD TEST REPORT 1_____________________________
   Job Name: RAAD001_ Queue: RAD    Group: RAADTST_
        Cls: _ Dsp: _ Pri: _ Rem: 000 Sys: _    Form: ____
  Orig Node: _________  Dest Node: _________ User Info: ___________________
  Orig User: _________  Dest User: _________
 Completion: ACT C D P S REM DST.NODE DST.USER
             Lev _ _ _ _ 000 _________ _________
CMD NAME     TYPE     DESCRIPTION
--- -------- -------- ------------------------------------------
_   AMOUNT   Field    AMOUNT
_   HDGDATE  Field    HEADING DATE
_   HDGID    Field    HEADING ID
_   HDGTYPE  Field    HEADING TYPE
_   NAME     Field    NAME
_   SSN      Field    SSN
_   TOTAMT   Field    TOTAL AMOUNT
_   _________ ________
    PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 10:Prev 11:Next 12:Stack
                  COPYRIGHT 2002, CONNECTIVITY SYSTEMS INC.
```

Use this screen to define reports that will be used as input to split or merge processing using CSIQCOPY. This screen is composed of four parts:

- Identification
- Selection
- Completion
- Field List.

Identification

Field	Description
Report	This is the unique entry ID for this report. Report is eight characters long and can contain any character including embedded spaces. The first character must be non-blank.
Desc	Optional free form text description to further identify this Report.

Selection

These fields are used to identify which report or reports are to be governed by this Report Definition. The selection fields are:

Field	Description
QUEUE	Source Spool Queue—Use one of these: LST, PUN, RDR, XMT, VML, VMR, VMP, or SPL. **Note:** The POWER External Device Writer processes only the LST Queue. Use either CSIQCOPY or RAAD Writers to process any of the other Spool Queues.
JOB NAME	Spooler Job name—Generic processing (“*” or “+”) can be used when defining this field.
CLS	Spooler job class.
DSP	Spooler disposition.
PRI	Spooler priority.
REM	POWER remote ID.
SYS	POWER sysid.
FORM	Forms number.
ORIG NODE	POWER origin node. Generic processing (“*” or “+”) can be used when defining this field.

Field	Description
ORIG USER	POWER origin user. Generic processing (“*” or “+”) can be used when defining this field.
DEST NODE	POWER destination node. Generic processing (“*” or “+”) can be used when defining this field.
DEST USER	POWER destination user. Generic processing (“*” or “+”) can be used when defining this field.
USER INFO	POWER user information field from * $$ LST card. Generic processing (“*” or “+”) can be used when defining this field.

Specify only those fields that are needed to uniquely identify the input report. For example, if class is irrelevant for this catalog, do not enter anything in the CLS field.

Completion

There is only one completion field. The Completion information is used when RAAD generates a CSIQCOPY jobstream. You can enter eight fields.

Field	Description
ACT	Specifies whether the report is deleted, altered, or left as-is. One of the following values can be specified: • DEL—The report is deleted. • DSP—The report is altered or deleted depending on its disposition. Reports with a disposition of “D” are deleted. Reports with a disposition of “K” are altered to a disposition of “L.” • ALT—The report is altered to the values specified in the remaining fields. • LEV—The report is left as is in the queue **Note:** Specify the LEV option only for ABNORMAL processing. If LEV is specified for NORMAL processing, the report prints repeatedly until it is deleted from the queue through some other means.
CLS	Used with ALT to specify the class to which the report is altered. If left blank, the class is not changed.
DSP	Used with ALT to specify the disposition to which the report is altered. If left blank, the disposition is not changed.
PRI	Used with ALT to specify the priority to which the report is altered. If left blank, the priority is not changed.
SYS	Used with ALT to specify the SYSID to which the report is altered. If left blank, the SYSID is not changed.

Field	Description
REM	Used with ALT to specify the Remote ID to which the report is altered. If left blank, the Remote ID is not changed.
DEST	Used with ALT to specify the POWER Destination Node to which the report is altered. If left blank, the Destination Node is not changed.
USER	Used with ALT to specify the POWER Destination User to which the report is altered. If left blank, the Destination user is not changed.

Field List

Fields within the report are necessary for selection, merging, and splitting purposes. Existing Field Definitions associated with this report are shown in a table in the bottom portion of the display. There are four columns in this table:

Column	Description
CMD	Command can be one of: • 'A'—Add a new Field Definition • 'E'—Edit existing Field Definition • 'D'—Delete existing Field Definition.
Name	Name of the field entered as defined.
Type	Type of entry. This is reserved for future use and in this release of RAAD it always shows a value of "Field."
Description	Description of field as entered when field was defined.

When either 'A' or 'E' is entered in the CMD area, you proceed to the Field Definition screen. See "RAAD Field Definition," page 49, for more information.

Fields are maintained alphabetically by their Name (or ID). The Field List is automatically updated when you add or delete individual fields.

PF Keys

PF Key	Label	Description
PF5	Update	Update the Catalog Definition on the RAAD File.
PF6	Add	Add a new Catalog Definition to the RAAD File.

PF Key	Label	Description
PF7	Bwd	Scroll backward in the Field List.
PF8	Fwd	Scroll forward in the Field List.
PF10	Prev	Scroll to the preceding Report Definition. Any changes you have made will be lost unless you have previously updated the record.
PF11	Next	Scroll to the next Report Definition. Any changes you have made will be lost unless you have previously updated the record.

RAAD Field Definition

```
RAAD025            Report Archive And Distribution System            11/20/03
CMD: ____________________      Field Definition                      07:22:30
Report Id: RAAD001
 Field Id: HDGID    Desc: HEADING ID_____________________________________
         Line: 002 Number of Lines: 001 Column: 001 Length: 010
   or Literal: ___________________________________
     or Field: ________
         Mask: ___________________________________
               Extract:Mask: No  Offset: 000 000 Justify: Left_
      Default: ___________________________________ or Field: ________
         Edit:Match Any: Yes All: No
               Range: No  NotRange: No  Value: Yes NotValue: No
     001-046 EDIT.VALUE                       EDIT.VALUE
      of  00 -------------------------------- --------------------------------
             ________________________________ ________________________________
             ________________________________ ________________________________
             ________________________________ ________________________________
             ________________________________ ________________________________
     PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 10:Prev 11:Next 12:Stack
                  COPYRIGHT 2002, CONNECTIVITY SYSTEMS INC.
```

There are up to four types of information defined for each field:

- Field Identification.
- Source of the data This can be a literal or Value, data from a specified location in the report page, or the contents from another Field Definition.
- Data Extraction. The portion of the source data to be extracted for this specific Field Definition.
- Data Editing. Special EDIT criteria that the extracted field must match. This can be used to search for specific data from columns in each report page.

Note: Review the *CSI-QCOPY Installation and Operations Guide* for more complete information on how fields are used in RAAD.

Field Identification

Field	Description
Field Id	This is the unique entry ID for this Field. This ID must be unique within the current Report ID. The ID is eight characters long and can contain any character including embedded spaces. The first character must be non-blank.
Desc	Optional free form text description to further identify this Field.

Source of Data

A Field can be defined in one of three ways: by its position within the body of the report, as a literal, or equated to another previously defined field. Each of these methods is mutually exclusive and occupies a separate line on the screen.

Field	Description
Line	Use this to define the position within the report where the field is located. There are four additional entry fields that must be supplied: • Line Number—This is the line containing the field. • Number of Lines—Normally this value is one (1). It can take on other values when used in conjunction with the Mask option. Consult the *CSI-QCOPY Installation and Operations Guide* for more information. • Column—The starting column for the field. • Length—Length of the field in bytes. **Note:** When using the Mask option, the field length used by CSIQCOPY may differ from what you specify here. Consult the *CSI-QCOPY Installation and Operations Guide* or more information.
Literal	Use this to define a literal or constant value for the field. Embedded spaces are processed correctly for the field. If the literal contains trailing spaces, then you must enclose it in quotes. Example: ‘literal with two trailing spaces ‘.
Field	Use this to define a field that is equated to another field. Under certain circumstances, this can be useful. Consult the *CSI-QCOPY Installation and Operations Guide* for more information.

Data Extraction

After a field is located, data can be extracted from it. This capability is provided for field data that may not have a fixed location on the screen, centered headings for instance, and for editing purposes. Consult the *CSI-QCOPY Installation and Operations Guide* or more information regarding both Data Extraction and Editing.

Field	Description
Mask	Specifies a pattern that CSIQCOPY looks for in the box bounded by the "Line Number," "Number of Lines," "Column" and "Length" values given above. Consult the *CSI-QCOPY Installation and Operations Guide* for more information.
Extract Mask	Yes/No flag determining the use of the "EXTRACTMASK" option of CSIQCOPY.
Offset	Offset relative to zero and the length for use with the "EXTRACTMASK" option. Consult the *CSI-QCOPY Installation and Operations Guide* for more information.
Justify	Data justification option of the "EXTRACTMASK" option. Consult the *CSI-QCOPY Installation and Operations Guide* for more information.

Editing

Edits can be performed against the field making selection easier to accomplish.

Field	Description
Default	Specifies the default value when the field is either not located according to the previously defined "Mask" or when editing values are not satisfied. The Default can be a literal, or it can be equated to a previously defined field.
Match Any Match All	Specifies whether the extracted data • Must match all of the range and/or value specifications or • Can match any one of the range and/or value specifications **Note:** The Match Any and Match All options are mutually exclusive.
Range	Specifies a list of one or more pairs of "from-to" ranges the extracted data must be in.
NotRange	Specifies a list of one or more pairs of "from-to" ranges the extracted data must not be in.
Value	Specifies a list of one or more character strings to which the extracted data must be equal.
NotValue	Specifies a list of one or more character strings to which the extracted data must not be equal. **Note:** "Range," "Notrange," "Value," and "Notvalue" are mutually exclusive. In addition, when either "Range" or "Notrange" is used, Edit Values must be entered in pairs.

Field	Description
Edit Values	Specify the edit value or values here. You can scroll through these values by using the PF7 and PF8 keys. To add a value, enter it on an empty line, to delete a value press the ERASE-EOF key or enter spaces for the value. Embedded spaces are handled properly. If the value contains trailing spaces, it must be enclosed in quotes (‘).

The combination of Mask and Edits provides a great deal of flexibility and power to the CSIQCOPY process. These options are described in more detail in the *CSI-QCOPY Installation and Operations Guide* l.

Example

The Field described in the example screen above is converted to CSIQCOPY parameters that look like:

```
FIELDS (
     001 (  /* HDGID   HEADING ID           */ -
        LINES ( 0002 0001 ) COLS ( 0045 0003 ) -
          ) -
```

CSIQCOPY identifies fields by a numeric ID. In the example above, the Field “HDGID” has been converted to Field Number “001.” This conversion is performed automatically for you by RAAD. You can, if you want, use numeric values to define the fields to RAAD. However, there is no benefit to this, because RAAD ignores your enumeration and sets the numeric Field ID in the order that fields are encountered.

During the generation Process, RAAD looks to see if the Field ID has already been encountered, and if so reuses the already assigned Field Number for this field definition. This feature is useful in field selection and segmentation processing.

For example, suppose you want to combine two reports, both of which contain a Heading ID. In the first report, the Heading ID is found as shown above, while in the second report it is found on line 3, column 12. In this situation, you can define a field named “HDGID” in both reports, locating the field according to the individual report requirements. When RAAD encounters the “HDGID” field in the second report, it reuses the Field Number assigned for the first report. Subsequent selections against Field “HDGID” will work properly regardless of which report is currently being processed.

Note: The Field ID and Description are included in the generated CSIQCOPY parameters for ease of problem resolution.

PF Keys

PF Key	Label	Description
PF5	Update	Update the Field Definition on the RAAD File.
PF6	Add	Add a new Field Definition to the RAAD File.
PF7	Bwd	Scroll backward in the Value List.
PF8	Fwd	Scroll forward in the Value List.
PF10	Prev	Scroll to the preceding Field Definition. Any changes you have made will be lost unless you have previously updated them.
PF11	Next	Scroll to the next Field Definition. Any changes you have made will be lost unless you have previously updated the record.

RAAD Recipient Definition

```
RAAD009            Report Archive And Distribution System            11/20/03
CMD: ____________________   Recipient Definition                      07:25:49
     Id: STDOUT   Desc: STANDARD QCOPY OUTPUT
 Banner: No  Index: No  Position:Line: 000 Col: 000
         ____________________________________
         ____________________________________
         ____________________________________
         ____________________________________
  Queue: LST  (LST/RDR/PUN)
  Class: L
   Copy: ___
   Dest: ________ / ________
   Disp: H
    Fno: ____
    Jnm: %OUTPUT_____________________________________________________________
   Jsep: _
    Pri: _
    Pwd: ________
    RBS: _____
 Remote: ___
  SysId: _
   User: QCOPY TEST_________________________________________________________
           PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 12:Stack
                 COPYRIGHT 2002, CONNECTIVITY SYSTEMS INC.
```

Use this screen to define Recipients of RAAD Outputs created using CSIQCOPY. This screen contains three parts:

- Identification
- Banner
- Output Characteristics.

Identification

Field	Description
Id	This is the unique entry ID for this Recipient. ID is eight characters long and can contain any character including embedded spaces. The first character must be non-blank.
Desc	Optional free form text description to further identify this Recipient.

Banner

The CSIQCOPY process can generate a banner page at the beginning of its output. Up to four 30-byte literals can be specified to appear on the banner page and the upper left hand corner of the banner can be specified by line and column. The literals can contain variables. Refer to the section titled "Variable Substitution in Literals" in the *CSI-QCOPY Installation and Operations Guide* for more information.

Field	Description
Banner	Yes/No switch for Banner Processing.
Index	Yes/No switch for CSIQCOPY index processing. Consult the *CSI-QCOPY Installation and Operations Guide* for more information.
Position	Line and Column of the upper left hand corner of the banner on the output page. The default is line 31, column 26, which is approximately the center of the page. CSIQCOPY adjusts the numbers you supply to ensure that the banner fits on the page.

Sample Banner

```
CSI-QCOPY     01-10-90  09.15   THE VM/POWER REPORT UTILITY
      COPYRIGHT (C) 2003, CONNECTIVITY SYSTEMS INC.
   CCCC      SSSS     IIIIII   UU    UU    SSSS    RRRRRR      0000        1
  CC  CC    SS  SS      II     UU    UU   SS  SS   RR   RR    00  00      11
 CC   CCC  SS    SS     II     UU    UU  SS    SS  RR    RR  00    00    111
 CC         SS          II     UU    UU   SS       RR   RR   00    00   1111
 CC          SSSS       II     UU    UU    SSSS    RRRRRR    00    00     11
 CC             SS      II     UU    UU       SS   RR RR     00    00     11
 CC   CCC  SS    SS     II     UU    UU  SS    SS  RR  RR    00    00     11
  CC  CC    SS  SS      II      UU  UU    SS  SS   RR   RR    00  00      11
   CCCC      SSSS     IIIIII     UUUU      SSSS    RR    RR    0000     111111

    1      0000                  1        0000              0000     222222
   11     00  00                11       00  00            00  00   22    22
  111    00    00               111      00    00          00    00  22    22
 1111    00    00              1111      00    00          00    00       22
   11    00    00     ------     11      00    00   ------ 00    00     22
   11    00    00               11      00    00          00    00   22
   11    00    00               11      00    00          00    00  22
   11     00  00                11       00  00            00  00   22
 111111    0000               111111      0000              0000    22222222
                       Line1 from BANNER Operand
                       Line2 from BANNER Operand
                       Line3 from BANNER Operand
                       Line4 from BANNER Operand
                       OUTPUT:outputid
                         JNAM:jobname
                         USER:user.info
                         JECL:class=q,disp=h
   0000      9999                 1      5555555                44     0000
  00  00    99  99               11      55                    444    00  00
 00    00  99    99     ::       111      55          ::       4444   00    00
 00    00  99    99     ::      1111      555555      ::      44 44   00    00
 00    00   99  99               11          55             44  44   00    00
 00    00    9999       ::       11           55     ::    44444444  00    00
 00    00     99        ::       11           55     ::         44   00    00
  00  00     99                  11      55   55                44    00  00
   0000     99                 111111     55555                 44     0000
```

Output Characteristics

Field	Description
Queue	Output Spool Queue—Use one of these: LST, RDR, or PUN.
Class	Spooler job class.
Copy	Number of copies.
Disp	Spooler disposition.
Dest	Power Destination Node and Destination User.
Fno	Forms ID.
Jnm	Spooler Job Name. Job name can be dynamically generated by stringing together any combination of defined Fields, standard Fields, and literals. Consult the section titled "Variable Substitution in Literals" in the *CSI-QCOPY Installation and Operations Guide* for more information. In addition, RAAD provides a new keyword ("%OUTPUT") which allows you to set the job name to be the same as the RAAD Output Name. "%OUTPUT" is the default value.
Jsep	Number of POWER Job Separators.
Pri	Spooler priority.
Pwd	Spooler Password.
RBS	The RBS parameter of the * $$ LST card.
Remote	POWER remote ID.
Sysid	POWER sysid.
User	POWER user information field from * $$ LST card. User can be dynamically generated by stringing together a combination of defined Fields, standard Fields, and literals. Consult the section titled "Variable Substitution in Literals" in the *CSI-QCOPY Installation and Operations Guide* for more information.

If a field is omitted, the corresponding element defaults to your installation defaults for POWER/ESA.

PF Keys

PF Key	Label	Description
PF5	Update	Update the Catalog Definition on the RAAD File.

PF Key	Label	Description
PF6	Add	Add a new Catalog Definition to the RAAD File.
PF7	Bwd	Scroll backward in the Recipient List.
PF8	Fwd	Scroll forward in the Recipient List.

RAAD Output Definition

```
RAAD010            Report Archive And Distribution System            11/20/04
CMD: _____________________     Output Definition                     07:23:26
 Id: RAAD001_ Desc: RAAD TEST 1_____________________________________
    Recipient: STDOUT__ Edit: _
       Format: ________ Edit: _
          Run: HH: __ MM: __ Frequency: ____ Holiday Table Name: ________
    Selection List
    CMD ID       TYPE     DESCRIPTION
    --- -------- -------- -------------------------------------------
    _   SEGID    Segment  SEGMENT WHEN HDGID CHANGES
    _   EXCLCO   Exclude  EXCLUDE COMBINED REPORT
    _   ________
    _   ________
    _   ________
    _   ________
    _   ________
    _   ________
    _   ________
    _   ________
  PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 9:Sel 10:Prev 11:Next 12:Stack
                   COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

Use this screen to define RAAD Outputs that are generated using CSIQCOPY. This screen is composed of three parts:

- Identification
- Output Characteristics
- Input and Selection Lists.

Identification

Field	Description
Id	This is the unique entry ID for this Recipient. ID is eight characters long and can contain any character including embedded spaces. The first character must be non-blank.
Desc	Optional free form text description to further identify this Report.

Output Characteristics

Field	Description
Recipient	The name of the Recipient Definition to be used for this RAAD Output. If omitted, the resulting job is generated using: • Job Name—Output ID • Class—A • Disp—H You can edit the Recipient by keying any character in the Edit field and pressing ENTER. See "RAAD Recipient Definition" page 53, for more information.
Format	The Name of the Format Definition to be used for this RAAD Output. You can edit the Format by keying any character in the associated Edit field and pressing ENTER.

Selection List

The Selection List identifies QCOPY commands used for Selection, Exclusion, Segmentation, Insertion and Stopping CSIQCOPY processing. The entry screens for each of these are described in more detail below.

The CMD column in the Selection List plays a larger role than it does for the Input List above. Three commands are available for your use:

- A—Add: Add a new entry to the list. You can optionally specify an ID when using the Add command.
- E—Edit: Edit the existing Selection List Entry.
- D—Delete: Delete the Selection List Entry.

PF Keys and Commands

PF Key	Label	Description
PF5	Update	Update the Catalog Definition on the RAAD File.
PF6	Add	Add a new Catalog Definition to the RAAD File.
PF7	Bwd	Scroll backward in the List.
PF8	Fwd	Scroll forward in the List.
PF10	Prev	Scroll backwards to the previous Output Definition.
PF11	Next	Scroll forwards to the next Output Definition.
	Copy	Makes a copy of this Output Definition including all of the Selection Entries. This differs from Add, which does not copy the Selection Entries.

Selection Entry

```
RAAD026A           Report Archive And Distribution System             11/20/03
CMD: _____________________ E X C L U D E   Definition                 07:31:44
  Output Id: RAAD001
       Name: EXCLCO   Desc: EXCLUDE COMBINED REPORT
       Type: Exclude  (Exclude/Insert/Segment/Select/Stop)
       Page: 00000000 00000000
    or Line: 00000000 00000000
    or Condition(s):                          001-010 OF 003
       CONT NAME     COND VALUE(S)
       ---- -------- --   --------------------------------
       ___  HDGTYPE_ EQ   COM_____________________________
       Or   HDGID___ EQ   CCC_____________________________
       ___  _______ __    DDD_____________________________
       ___  _______ __    _____________________________
       ___  _______ __    _____________________________
       ___  _______ __    _____________________________
       ___  _______ __    _____________________________
       ___  _______ __    _____________________________
       ___  _______ __    _____________________________
       ___  _______ __    _____________________________
     PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 10:Prev 11:Next 12:Stack
                  COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

Each of the screens for the five types of Selection Entries available in RAAD is formatted in a similar fashion. The screen is composed of three parts:

- Identification
- Selection Specific Information
- Condition Array.

Identification

Field	Description
Output Id	The name of the associated Output Definition is displayed here. It cannot be modified.
Name	You must supply a name for this Selection Entry that is unique within its associated Output Definition.
Desc	Free form text to provide a description of this individual selection entry.
Type	The Type of Selection Entry—The available types are shown to the right of this field. To change types, enter the type you desire and press ENTER. The Selection Specific Information changes depending on the Type you select.

Selection Specific Information

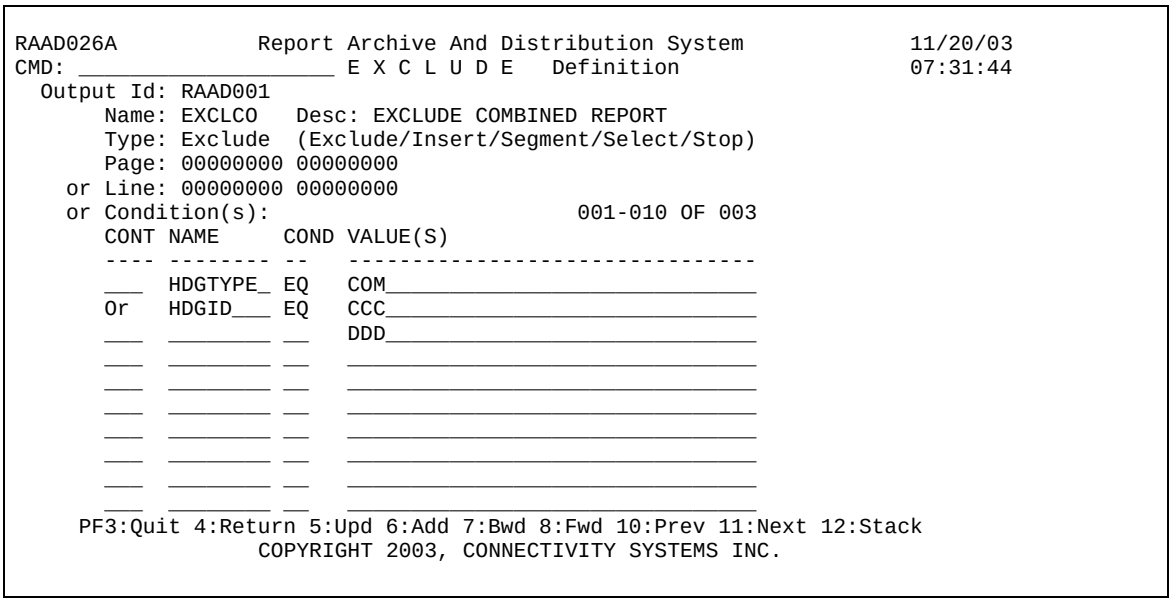
The Selection Specific Information varies depending on the Type of Selection Entry with which you are working. The Selection Specific Information is described in detail for each Selection Entry Type below.

Condition Array

The Condition Array allows you to specify various conditions in which the CSIQCOPY processing for this particular Selection Entry Type takes effect. There are four parts to each element in the Condition Array:

Field	Description
CONT	Continuation determines the logical connection between this element in the array and the element immediately preceding it. Values can be either: • **And**—The two elements are logically AND'ed together, meaning that both elements must be satisfied in order for this condition to be met. • **Or**—The two elements are logically OR'ed together, meaning that if either element is met, the condition is considered to be met. • **Del**—Used to delete a condition from the array.
NAME	This is the field name, which must be defined in one, or more of the Inputs associated with the Output for this Selection Entry.
COND	Determines the type of comparison used by CSIQCOPY when processing this condition. Permissible values are: EQ, NE, LT, LE, GT, and GE.
VALUE(s)	The literal value to be compared to the field specified previously. These are literal values and can optionally be enclosed in quotes. 'LITERAL'. Quotes are only mandatory if the first character of the literal is a space. If you wish to compare using a list of literal values, specify each on a separate line of the display as shown in the example screen above. Multiple VALUES are logically OR'ed together by CSIQCOPY. For example, in the example screen above the conditions are satisfied whenever: • Field 'HDGTYPE' equals 'COM' or • Field 'HDGID' equals either 'CCC' or 'DDD.'

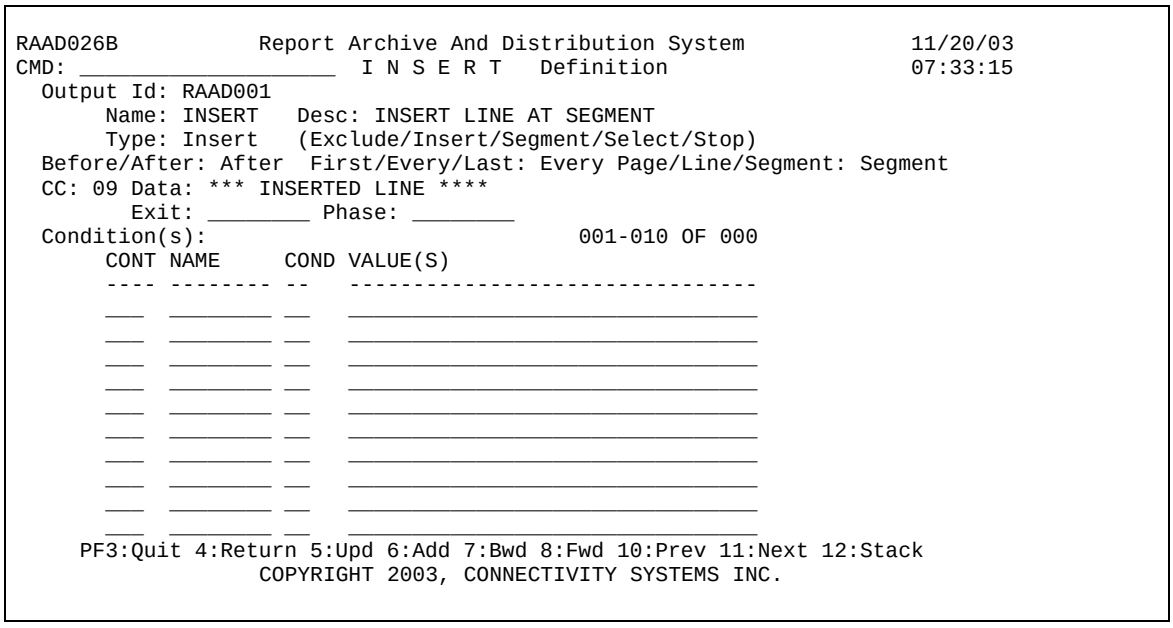
Exclude



The Exclude is used by CSIQCOPY to determine which pages from each input report are to be excluded from OUTPUT processing. You can exclude pages from the CSIQCOPY report in one of three ways:

Field	Description
Page	From and To page range
Line	From and To line range
Condition	(see above for entry instructions)

Insert



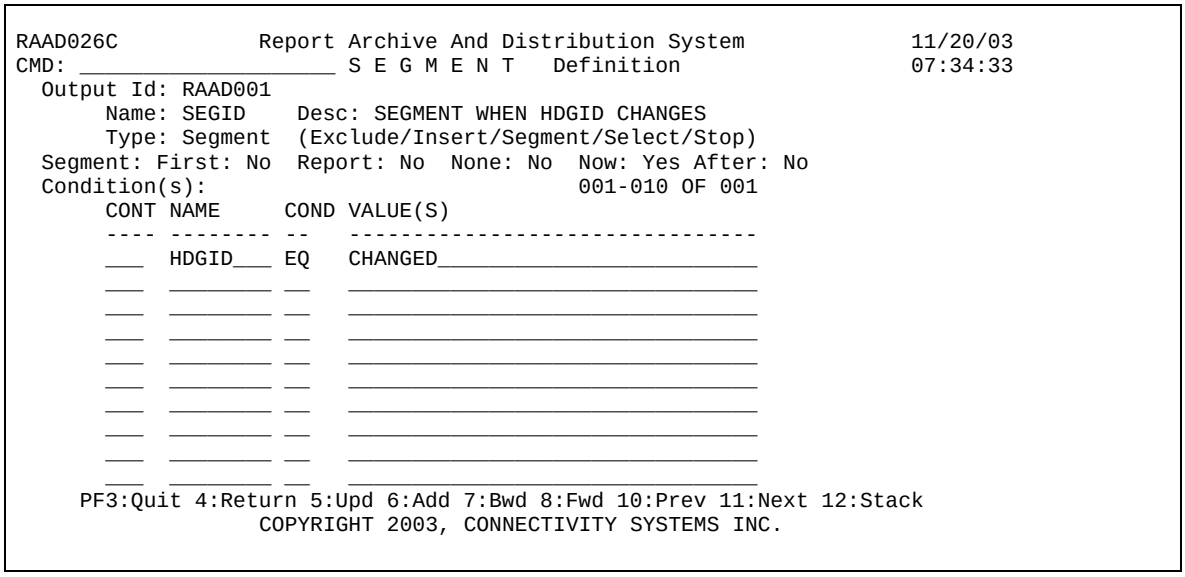
Inserts can be used to define additional printer data or control information that CSIQCOPY is to insert into the output report at specified locations. You can specify as many INSERT Operands as you need on each RAAD Output. CSIQCOPY processes the INSERT Commands in the sequence specified. Therefore, use care when selecting a Name for the Inserts because RAAD stores them alphabetically. If you specify more than one INSERT with the 'BEFORE FIRST' location, you must specify them in reverse sequence, because, as each INSERT is processed by CSIQCOPY, its data is inserted at the beginning of the page or line.

The individual entry fields are:

Field	Description
Before/After First/Every/Last Page/Line/Segment	These three fields taken together determine the location for the Insert operation.
CC	Specifies the channel command that precedes the inserted data. The channel command is specified as a two-digit hexadecimal value.

Field	Description
Data	Specifies the string of data to be inserted by CSI-QCOPY. This string can be up to 64 bytes in length or 30 if entered in hexadecimal. This field is ignored if either the EXIT or PHASE field is specified. To enter hexadecimaldata in this field, you must specify the string as x'hexadecimal.data'. It is not necessary to supply quotes when entering character (non-hexadecimal) data.
Exit	Specifies the name of a user supplied exit program that CSIQCOPY calls at the specified times. Consult the *CSI-QCOPY Installation and Operations Guide* for more information.
Phase	Specifies the name of a user supplied load module that is loaded by CSIQCOPY. See the *CSI-QCOPY Installation and Operations Guide* or more information.

Segment



The SEGMENT Entry is used by CSIQCOPY to determine when to segment the output report being generated. You can specify as many SEGMENT Entries as you need. If you do not specify any SEGMENT Entries, CSIQCOPY generates a single output report from all Input reports.

If you specify more than one Segment Entry, CSIQCOPY examines each one, in the order specified, to determine when to segment the output report. As a result, use care when naming Segment Entries, because RAAD stores them alphabetically within the Output Definition.

The individual entry fields are:

Field	Definition
First	Specifies that a segment occurs prior to CSIQCOPY outputting the first line of the output report. This is the default if the Segment Entry is omitted.
Report	Specifies that a segment occurs prior to CSIQCOPY outputting the first line of each selected report.
None	Specifies that no segment be done.
Now	Specifies that a segment occurs before the current page is written by CSIQCOPY.
After	Specifies that a segment occurs after the current page is written by CSIQCOPY.

These five options (First, Report, None, Now, and After) are mutually exclusive. 'Yes' can be specified for only one of them. The program enforces this restriction.

See the *CSI-QCOPY Installation and Operations Guide* or more information on the Segment Command.

Select

```
RAAD026D           Report Archive And Distribution System            11/20/03
CMD: _____________________  S E L E C T   Definition                 07:36:42
  Output Id: RAAD001
       Name: SELSUB   Desc: SELECT ACCOUNTING SUB
       Type: Select   (Exclude/Insert/Segment/Select/Stop)
  Select: All: No  Unselected: No
  Condition(s):                                 001-010 OF 001
       CONT NAME     COND VALUE(S)
       ---- -------- --   --------------------------------
       ___  SUBID___ EQ   ACCT_____________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
    PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 10:Prev 11:Next 12:Stack
                  COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

The Select Entry is used by CSIQCOPY to determine which input pages are to be written. You can specify as many Select Entries as you need. If you do not specify any Select Entries, CSIQCOPY selects all pages, unless one or more Exclude Entries is present.

The individual entry fields are:

Field	Description
All	Yes/No switch indicating that all pages be selected.
Unselected	Yes/No switch indicating that only those pages that have not otherwise been selected be selected by this Select Entry.

Note: If either "All" or "Unselected" are chosen, RAAD does not process the conditions.

Stop

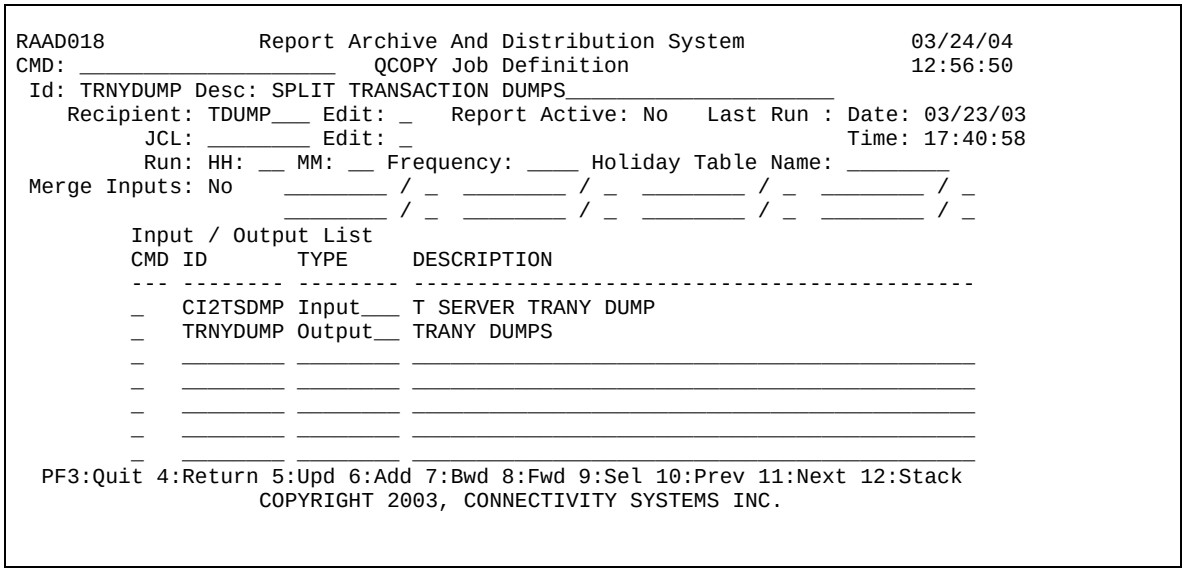
```
RAAD026E           Report Archive And Distribution System            11/20/03
CMD: _____________________    S T O P   Definition                   07:38:46
  Output Id: RAAD001
       Name: STOPIT   Desc: STOP AT GEN
       Type: Stop     (Exclude/Insert/Segment/Select/Stop)
  Stop: Now: Yes After: No
  Condition(s):                              001-010 OF 001
       CONT NAME     COND VALUE(S)
       ---- -------- --   --------------------------------
       ___  SUBID___ EQ   'GEN '_______________________________
       ___  _______ __   _______________________________________
       ___  _______ __   _______________________________________
       ___  _______ __   _______________________________________
       ___  _______ __   _______________________________________
       ___  _______ __   _______________________________________
       ___  _______ __   _______________________________________
       ___  _______ __   _______________________________________
       ___  _______ __   _______________________________________
       ___  _______ __   _______________________________________
    PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 10:Prev 11:Next 12:Stack
                  COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

The Stop Entry is used to determine when to stop processing pages for this Output Definition.

The individual entry fields are:

Field	Description
Now	Yes/No switch indicating that processing stop immediately. The current page is not written.
After	Yes/No switch indicating that processing stop as soon as the current page has been written.

RAAD QCOPY Job Definition



Use this screen to define QCOPY Jobs that RAAD generates. This screen is composed of four parts:

- Identification
- Output Characteristics
- Merge Inputs
- Input/Output List.

Identification

Field	Description
Id	This is the unique entry ID for this QCOPY Job. ID is eight characters long and can contain any character including embedded spaces. The first character must be non-blank.
Desc	Optional free form text description to further identify this Report.

Output Characteristics

Field	Description
Recipient	The name of the Recipient Definition to be used for this RAAD Output. If omitted, RAAD generates the resulting job using: • Job Name—Output ID • Class—A • Disp—H You can edit the Recipient by keying any character in the Edit field and pressing ENTER.
Report Active	A Yes/No switch which determines whether QCOPY scheduling is performed for this Output.
JCL	The name of the JCL deck submitted to the POWER RDR queue when this Output is run. The use of this filed is entirely optional. See "JCL Names" below for more information.
Run	You must specify both hour (HH) and minute (MM) to have RAAD automatically generate this Output. You can optionally specify Frequency and a Holiday Table to further refine the automatic generation of this RAAD Output. • Hours must be given in military time: 00 - 23. • Minutes can be from 00 - 59. • Frequency can be one of: — 7DAY—Seven day week, Sunday - Saturday — 6DAY—Six day week, Monday - Saturday — 5DAY—Five day week, Monday - Friday — SUN—Sunday only — MON—Monday only — TUE—Tuesday only — WED—Wednesday only — THU—Thursday only — FRI—Friday only — SAT—Saturday only The Holiday Table names the separately assembled CICS phase that can optionally be used to identify holidays. RAAD Outputs are not generated on a holiday. See "Holiday Table," page 135, for more information.

The Last Run Date and Time fields show the date and time of the most recent submission of this Output by RAAD. These fields are informational only and cannot be updated through this screen.

JCL Names

Under normal circumstances, RAAD generates a CSIQCOPY jobstream for this Output when the job is submitted to VSE/POWER for execution. You can preview the generated JCL by using the "Generate" command (see below). As a result, it is not necessary for you to provide a JCL deck for each Output you define.

However, since RAAD provides at best a subset of the capabilities of CSIQCOPY, it may occasionally become necessary for you to provide the JCL for RAAD's use. When doing so, care must be used when choosing a name for this JCL deck.

When the "Generate" command is used, the resulting JCL is added to the RAAD dataset with the same name as it associated Output ID. This situation is shown in the example screen above. Whenever the Output Definition or any of its subordinate list entries are changed, RAAD checks the JCL name provided. If the name is the same as the Output ID, the JCL deck is deleted when the Output Definition is updated. Consequently, if you need to provide your own JCL for this Output, it must have a different named than the Output ID to have the JCL preserved when making subsequent changes to the Output Definition.

Merge Inputs

If you wish to merge two or more input reports according to data contained within the reports, enter "Yes," for merge, and set up the fields to facilitate the merge process. Each input report must utilize the same name, an 8 character Field ID, in order for the merge process to work properly. You can specify up to eight fields for merging and each can be merged in either "A" for ascending or "D" for descending sequence.

Inputs/Output List

The bottom portion of the screen shows the Inputs (Reports) and Outputs associated with this QCOPY Job. These entries are similar to the INPUT and OPUTPUT sub-commands of CSIQCOPY. See the *CSI-QCOPY Installation and Operations Guide* for more information.

There are three commands available for the CMD column in the Input/Output List.

- A—Add: Add a new entry to the list. You can optionally specify an ID when using the Add command.
- E—Edit-Edit the existing Selection List Entry.
- D—Delete-Delete the Selection List Entry.

You must specify a type when adding elements to this list. Only the first character of the type is recognized and must be either "I" for Input or "O" for Output. Input reports must be defined previously using the "Report Definition" display. Output reports must be defined previously using the "Output Definition" display. RAAD sorts the Inputs first, and the Outputs second, retaining the order in which you entered them.

PF Keys and Commands

PF Key	Label	Description
PF5	Update	Update the QCOPY Job Definition on the RAAD File.
PF6	Add	Add a new QCOPY Job Definition to the RAAD File.
PF7	Bwd	Scroll backward in the List.
PF8	Fwd	Scroll forward in the List.
PF10	Prev	Scroll backwards to the previous QCOPY Job Definition.
PF11	Next	Scroll forwards to the next QCOPY Job Definition.
	COPY	Makes a copy of this Output Definition including all of the Selection Entries. This differs from Add, which does not copy the Selection Entries.
	GENERATE	Causes RAAD to generate the CSIQCOPY jobstream for this QCOPY Job and presents it to you for review.
	RUN	Causes RAAD to submit the CSIQCOPY jobstream for immediate execution by VSE/POWER.
	DEBUG	Provides a formatted dump of all records associated with this Output Definition. **Note:** This facility is provided for the use of CSI Technical Support. Use only on the advice of CSI Technical Support.

Note: In order for the GENERATE and RUN commands to function properly, a skeleton QCOPY jobstream must be provided. See “RAAD System Configuration,” page 97, for more information.

RAAD Device Definition

```
RAAD011A           Report Archive And Distribution System            11/20/02
                             Printer Definition                      07:40:29
   CMD: _____________________ Type: PRINTER   (Printer/Writer/List/Download/Hfs)
  Name: $$$$     Desc DEFAULT PRINTER_____________________________
   Buffer Size: 1920  Formfeed 1st: Yes Formfeed Last: No
  FCB Name: $$BCFB00  JSEP: No    Max N/L: No    Wrap: No
      Max. Line: 132  Align (1/T): T   Duplex Printer: No
        Restart: No   Print SP0: Yes  VFC: Yes  DFRSP: No
                      Forms: No  Initial Form: ____
  TCP/IP Name: ____________________________________ Port: 00515 Sysid: 00
        Queue: RAW_________________________________________
               ASCII Escape Begin: __ End: __
  Translate Table: STANDARD Printer Exit: _________
Init String: ____________________________________________________________________
             ____________________________________________________________________
             ____________________________________________________________________
Line String: ____________________________________________________________________
Term String: ____________________________________________________________________
             ____________________________________________________________________
       PF3:Quit 4:Return 5:Update 6:Add 7:Bwd 8:Fwd 9:Strings 12:Stack
                   COPYRIGHT 2002, CONNECTIVITY SYSTEMS INC.             1.0A
```

There are five different kinds of Devices used in RAAD. Each can be used interchangeably whenever a printer is called for, either for Spooler Polling or printing from the RAAD Queue Display. The fiver kinds of Devices are:

- **Printer**—Defines a printer connected to the network either identified to CICS or accessed via TCP/IP, provided you have TCP/IP installed on the mainframe
- **Writer**—Defines an internal printer than can be used to direct output to any of the queues known to RAAD or to a user-written program
- **List**—Specifies a list of printers (Printer or Writer) that RAAD can choose from for printing purposes
- **Download**—Defines a special type of printer used for TCP/IP downloads to a PC
- **Hfs**—Defines a Writer whose output is directed to the DOC queue
- **PDF**—Defines a Writer to generate PDF files.

Each of these kinds of Devices is managed through the Device Definition Process with its own unique screen formats. You can switch between the five kinds of Devices using the “Type” entry on the 3rd line of each screen.

RAAD Printer Definition

Field	Description
Type	Controls the Type of this device. Type can be one of: • (P)rinter—Printer • (W)riter—Writer • (L)ist—List • (D)ownload—Download Only the first letter needs be entered to switch the Device Type. **Note:** You must press ENTER after changing the type to get to the proper screen.
Name	This is the unique Name for this Printer. Name is eight characters long and can contain any character including embedded spaces. "$$$$" is a reserved name that defines the properties to use when a printer is not defined to RAAD. Using the "$$$$" mechanism, it is not necessary to define all printers.
Desc	Optional free form text description to further identify this Device.
Buffer Size	If a printer has a buffer size other than 1920 bytes, enter that value here.
Formfeed 1st	Yes/No switch—If Yes, an automatic Form Feed is performed prior to printing the 1ST line of each report. If Job Separators are being printed, the Forms Feed occurs prior to the Job Separator being printed.
Formfeed Last	Yes/No switch—If yes, an automatic Form Feed is performed after printing the LAST line of each report. If Job Separators are being printed, the Form Feed occurs after the ending Job Separator has been printed.
FCB Name	The FCB (Forms Control Buffer) name entered here is used when a report is printed and an FCB was not specified on the "* $$ LST" card that created the report. It is also used when printing RDR and PUN queues. If your system uses printers that do not require FCBs and you do not have FCBs in your system, see the section, "Generating FCBs," page 181, for assistance in cataloging one or more FCBs to your Core Image Library. If omitted, the default value is $$BFCB00. If you use the generic form of FCB "$$$$xxxx", RAAD looks for a "FCB2" version of the FCB, that is "FCB2xxxx."
JSEP	Yes/No switch-This Operand controls the job separators that are printed between reports.

Field	Description
Max N/L	Yes/No switch—Most 3270-type printers do not require a new line (NL) character at the end of a full line, defined by the "Max Line" option. If you have a printer that needs NLs on all lines, specify "Yes." **Note:** If you specify "No" when your printer requires "Yes," double spaced reports may print as single spaced. If you specify, "Yes" when your printer requires "No," single spaced reports may print as double spaced.
Wrap	"Yes" (the default) causes any print lines that exceed the "Max Line" value to wrap to the next line. "No" causes the line to be truncated. If you specify a value for "Max Line" that is shorter than the actual printer line length, specify "No" here. This can be used if you print only 8" X 11" size paper on a printer that can handle wider paper.
Max Line	Used in conjunction with "Max N/L" to control insertion of NL characters at the end of each print line, and "Wrap" to control whether or not to wrap or truncate lines exceeding this length. If a value is specified here that is less than the actual printer line length, "Max N/L" must also be set to "Yes."
Align	This Operand is used to specify how the forms are aligned in your printer. It can be either: • '1'—The forms are aligned with the first print line occurring at the channel 1 location in the FCB. • 'T'—The forms are aligned with the first print line occurring at the top-of-form. RAAD advances to the channel 1 location in the FCB prior to printing. For laser printers, specify 'T'.
Duplex Printer	Yes/No switch—This option specifies whether this printer is a duplex page printer (two-sided printer). If you specify "Yes" for this operand, RAAD issues an extra form feed at the end of each report that contains an odd number of pages.
RESTART	Yes/No switch—This option (Printer Restart, new with RAAD) specifies whether RAAD attempts to restart a printing task to this device following an uncontrolled CICS shutdown.
Print SP0	Yes/No switch—"Yes" causes the printer to recognize a print and space 0 lines command (carriage return only, no line feed). If "No" is specified, RAAD treats a print and space 0 command as print and space 1.
VFC	Yes/No switch—Indicates whether the printer supports the VFC command (x'0C').
DFRSP	Yes/No switch—This option tells RAAD whether to require a Definite Response when sending data to an SCS printer.

Field	Description
Forms	Yes/No switch—This option controls whether or not a printer is to wait on a forms-mount condition. This condition is detected when the "FORMS" Operand on the "* $$ LST" card is different from the previous report. If "Yes" is specified and a forms-mount condition is detected, RAAD suspends the print task on the printer indefinitely and displays a forms-mount indicator on the Queue Display and Control Devices Display. When a user sees that a printer is waiting on a forms-mount, entering a "GO" command on either screen gets the printer started. The initial forms name can be specified using the "Initial Form."
Initial Form	This option can be used to supply an initial Forms Name. This must be the name of the form that is normally in the printer. This option is only used when "Forms = Yes" is specified. It can prevent an unneeded forms-mount message at RAAD start-up.
TCP/IP Name	This is the address of the TCP/IP Printer. It can either be the alias name as defined to TCP/IP for VSE, or the actual IP address in the form: *nnn.nnn.nnn.nnn*.
Port	This is the TCP/IP port used to open communications with the printer. For most cases, the default, 515, is correct. **Note:** If for some reason you have customized this port, then the new port number must be reflected here.
Sysid	This is the TCP/IP sysid for this printer.
Queue	Use this operand to specify the printer queue that receives data from the host. In most cases, the default, RAW, works correctly. Consult your TCP/IP printer documentation for more information.
ASCII Escape	Under normal circumstances, reports directed to TCP/IP printers are translated from EBCDIC to ASCII prior to transmitting them to the printer. These two operands allow you to imbed ASCII data in the print line. "Begin" identifies a leading character that signals RAAD to not translate the characters that follow until the byte specified by "End" is encountered. Both bytes can be the same character. Suppression of the default EBCDIC->ASCII translation can extend across print lines if necessary.
Translate Table	This is the name of an optional translate table to be used for reports being printed. The "STANDARD" preserves all characters except x'FF' and X'00' which are translated to spaces. This translate table, if specified, must be a separately assembled assembler language phase. It is not necessary to identify this phase to CICS in the PPT or through CEDA DEF commands. The format of the translate table is discussed in the "Printer Exits" section of this manual, page 157.
Printer Exit	This names a separately compiled CICS program that receives control from RAAD whenever a report is directed to this printer. See "RAAD Printer Exit Facility," page 163, for more information.

Field	Description
Init String	This specifies an optional character string to be used each time a report is about to start printing. The string can be specified in character or hexadecimal (x'000000') formats. Refer to section "Printer Exits" for more information.
Line String	This Operand is used to specify an optional character string to be prefixed to every data line in every report printed by RAAD. The string can be specified in character or hexadecimal (x'000000') formats. Refer to section "Printer Exits" for more information.
Term String	This Operand is used to specify an optional character string to be used each time the printing of a report completes or is stopped. The string can be specified in character or hexadecimal (x'000000') formats. Refer to section "Printer Exits" for more information.

Strings can also be specified as a reference to the RAAD String Definitions. This is done by entering a percent sign ('%') followed by the String Definition Name. This allows you to establish a set of common strings that can be used by several printers making it easier to maintain the string information. A list of the available string definitions can be obtained by pressing PF9.

RAAD Writer Definition

```
RAAD011C           Report Archive And Distribution System            11/20/03
                             Writer Definition                       07:43:19
   CMD: _____________________ Type: WRITER  (Printer/Writer/List/Download/Hfs)
  Name: $RAD     Desc WRITER TO RAAD_____________________________
  Writer     Queue: RAD           Writer   Program: ________
          Job Name: ________               Recform: _ F(ixed) V(ariable)
             Class: _                   Line Length: ___
              Disp: _                    Line/Block: ___
               Pri: _                     Blocksize: _____
            Remote: ___
            SYS Id: _
         Dest Node: ________
         Dest User: ________
        Copy Count: __
              JSEP: __
               FCB: ________
            PF3:Quit 4:Return 5:Update 6:Add 7:Bwd 8:Fwd 12:Stack
                   COPYRIGHT 2002, CONNECTIVITY SYSTEMS INC.            1.0A
```

A Writer is similar to a printer in that you can specify the name of a Writer anywhere in RAAD that the name of a printer can be specified. A Writer is different from a printer in that it does not use any CICS terminal, and can execute a user written program to output the report lines.

RAAD supports two types of Writers:

- A Writer used to spool reports or Jobs to the RAAD queue (RAD), SPL queue, POWER LST, RDR or PUN Queues.
- A Writer that executes a user written program to process the report lines instead of a RAAD supplied program.

Each output Writer can only process one report at a time.

Field	Description
Type	Specifies the Type of this device. Type can be either: • (P)rinter—Printer • (W)riter—Writer • (L)ist—List Only the first letter needs to be entered to switch the Device Type. **Note:** You must press ENTER after changing the type to get to the proper screen.
Name	Specifies the unique Name for this Printer. Name is eight characters long and cannot contain any special characters, including embedded spaces.
Desc	Allows you to enter optional, free form text, such as a description, to further identify this Device.

Data entry for the two Writer types is displayed in columns. The Columnar data is mutually exclusive. You cannot specify both a Queue and a Program for a single Writer.

Writer to a Queue

Field	Description
Queue	Used to specify the destination queue for this Writer. Can be one of these: RAD, SPL, LST, RDR, or PUN.
Job Name	Used to specify a Job Name used for all output through this Writer. If omitted, the Writer uses the input Job Name. instead.
Class	Used to specify a Job Class used for all output through this Writer. If omitted, the Writer uses the input Job Class instead.
Disp	Used to specify a Job Disposition used for all output through this Writer. If omitted, the Writer uses the input Job Disposition instead.
Pri	Used to specify a Job Priority used for all output through this Writer. If omitted, the Writer uses the input Job Priority instead.
Remote	Used to specify a Remote ID used for all output through this Writer. If omitted, the Writer uses the input Remote ID instead.

Field	Description
SYS Id	Used to specify a POWER SYSID used for all output through this Writer. If omitted, the Writer uses the input POWER SYSID instead.
Dest Node	Used to specify a Destination Node used for all output through this Writer. If omitted, the Writer uses the input Destination Node instead.
Dest User	Used to specify a Destination User value used for all output through this Writer. If omitted, the Writer uses the input Destination User value instead.
Copy Count	Used to specify the number of copies used for all output through this Writer. If omitted, the Writer uses the input number of copies instead.
JSEP	Used to specify the POWER Job Separators used for all output through this Writer. If omitted, the Writer uses the input JSEP specification instead.
FCB	Used to override the FCB for all output through this Writer. If omitted, the Writer uses the input FCB instead.

Writer to a Program

Field	Description
Program	The name of a separately compiled CICS program that receives the report lines from RAAD.
Recform	Specifies either ‘F’ for fixed or ‘V’ for variable line length.
Line Length	Specifies the data line length for Fixed format.
Line/Block	Used for Fixed format to specify the number of report data lines passed to the Writer program at one time.
Blocksize	Used for Variable format to specify the maximum block size of data lines passed to the Writer program.

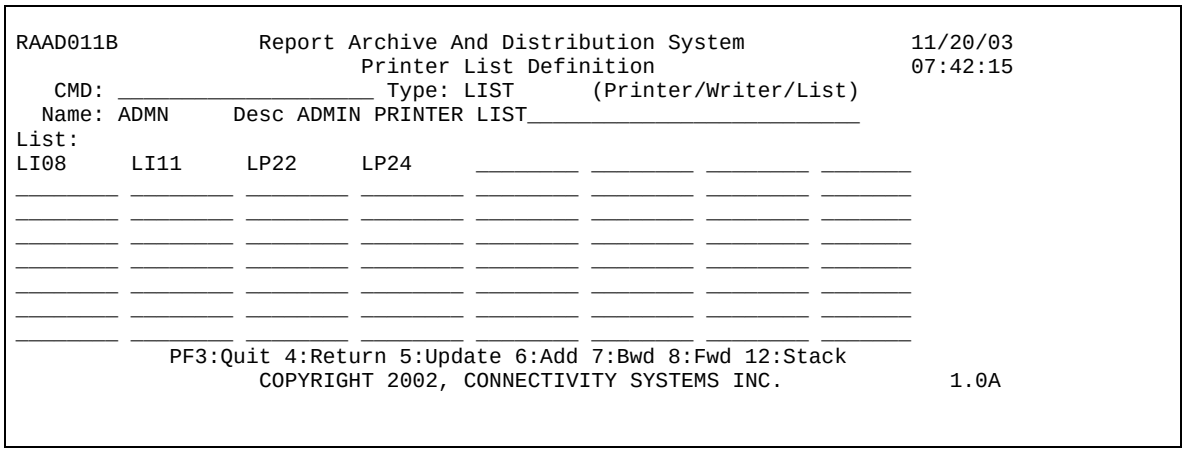
Obviously, the Recform, Line Length, Line/Block, and Blocksize specifications given here must match those expected by the program itself.

When initially installed, RAAD provides four writers for your use:

- $LST—Writer to the POWER LST queue.
- $RAD—Writer to the RAD queue (shown above)

- $RDR—Writer to the POWER RDR queue
- $SPL—Writer to the RAAD SPL queue.

RAAD List Definition



A RAAD List can be specified anywhere that a printer can be specified in RAAD. When you use a RAAD List, RAAD searches the devices defined in the list, and uses the first available device.

The List itself is relatively simple. To add a Device to the list, key it's ID into an empty slot. To remove a Device from the list, press ERASE-EOF or space it out. The list is automatically condensed when you press ENTER.

There is a maximum of 64 Devices that can be entered into any one list. Additionally, the Devices given in the list cannot be themselves RAAD Lists.

RAAD Download Definition

```
RAAD011D           Report Archive And Distribution System            04/20/04
                             Printer Definition                       13:38:10
    CMD: _____________________ Type: DOWNLD  (Printer/Writer/List/Downld/Hfs)
   Name: DTG1     Desc TEST DOWNLOAD TARGET_____________________________

   Buffer Size: 16000  Formfeed 1st: Yes Formfeed Last: No
   FCB Name: $$BFCB00  JSEP: No    Max N/L: No    Wrap: No
       Max. Line: 132  Align (1/T): 1   Duplex Printer: No
         Restart: No   Print SP0: Yes  VFC: Yes  DFRSP: Yes
                       Forms: No  Initial Form: ____


   Translate Table: STANDARD Printer Exit: ________
 Init String: ____________________________________________________________________
              ____________________________________________________________________
              ____________________________________________________________________
 Line String: ____________________________________________________________________
 Term String: ____________________________________________________________________
              ____________________________________________________________________

  PF1:Help 3:Quit 4:Return 5:Update 6:Add 7:Bwd 8:Fwd 9:String 12:Stack
                    COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.             1.2A
```

Fields present on this screen are the same as described above for Printer Definition. Device specific information such as TCP/IP address and port are not present here.

This screen is used to define the characteristics for a mainframe to PC download operation using TCP/IP. See “PC Download,” page 10, for more information.

RAAD HFS Writer Definition

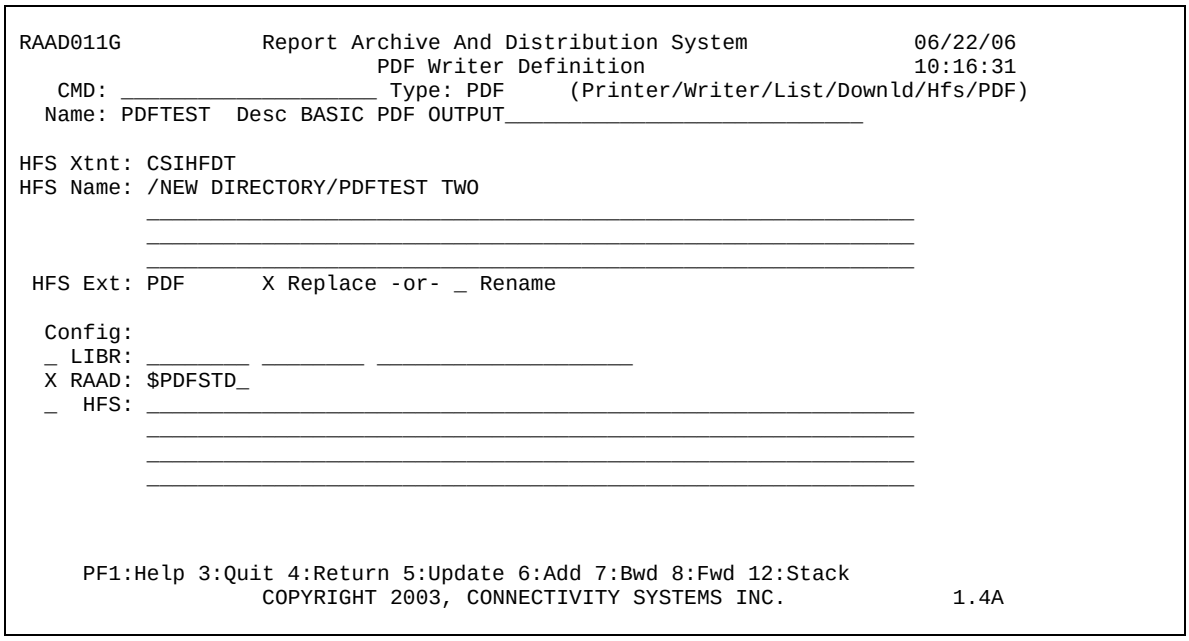
```
RAAD011F           Report Archive And Distribution System            06/22/06
                             HFS Writer Definition                    09:27:31
   CMD: _____________________ Type: HFS     (Printer/Writer/List/Downld/Hfs/PDF
  Name: TOASCT   Desc TO DOC QUEUE ASCII DATA_____________________

HFS Xtnt: CSIHFDT
HFS Name: /TEST DIRECTORY ONE/%JNM %FDT
          ____________________________________________________________
          ____________________________________________________________
          ____________________________________________________________
 HFS Ext: ATXT     X Replace -or- _ Rename -or- _ Append

                                  CLS - Job Class       JNM - Job Name
                                  DES - Description     JNO - Job Number
                                  DND - Dest. Node      JSF - Job Suffix
                                  DSP - Job Disposition OND - Orig Node
                                  DUS - Dest. User      OUS - Orig User
                                  FCB - Rrport FCB      PRI - Job Priority
                                  FDT - File Date       SYS - Job Sysid
                                  FRM - Forms Id        USR - User Information
                                  FTM - File Time

    PF1:Help 3:Quit 4:Return 5:Update 6:Add 7:Bwd 8:Fwd 12:Stack
                    COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.             1.4A
```

An HFS Writer can be used to transfer reports from any of the supported RAAD queues to the DOC queue.

Note: To use the HFS Writer you must also purchase HFS, which is separately available from CSI.

Field	Description
HFS Name	This is the file name for all output directed to the DOC queue using this writer. This name must be the fully qualified path name beginning with the root directory. It can contain one or more of the keywords shown on the screen. Directory and file names can be made up of any characters including embedded spaces, except for slash ('/') and period ('.') which cannot be used in the name. The slash is assumed to indicate a directory separator, and the period defines the beginning of the file name extension. The directory path given here must exist when the HFS writer is used. See "Queue Display for the DOC Queue," page 116, for instructions for creating and maintaining directories. In the example screen above, RAAD constructs a file name using the Job name and file date. The constructed file name might look like: `/TEST DIRECTORY ONE/CSIRAA01 04-19-04.TXT`
HFS Ext	This is the file name extension and can be up to eight bytes in length. The extension cannot contain embedded spaces. There are no edits on the extension value. You can customize RAAD for specific extensions. See "HFS File Interface," page 107, for more information.
REPLACE | RENAME | APPEND	Determines processing when a file of the specified name is already present in the HFS. REPLACE is the default. If you specify RENAME, RAAD interrogates the name from right to left looking for the string *000* (zeroes). When it locates the string, RAAD increments this number until a unique name is created. For example, a file name *Test File 000* may have several entries on the HFS: *Test File 000*, *Test File 001*, *Test File 002*, etc.

PDF WRITER DEFINITION



Use this writer to create PDF images of mainframe reports.

Note: To use this writer, you must also purchase HFS, which is separately available from CSI. In addition, you must be running *TCP/IP for VSE release 1.5E* or l=later to get the actual PDF subroutine, which is included in the TCP/IP distribution.

Field	Description
HFS Xtnt	This is the seven-character DLBL name of the HFS extent that will contain the resulting PDF file. A corresponding DLBL and EXTENT must be present in the CICS jobstream or standard labels.
HFS Name	Enter here the name of the resulting PDF file. This must be the fully qualified path name of the HFS file beginning with a directory separator. Variable substitution can be used in the same manner as described for the HFS writer described above.
HFS Ext	Enter here the HFS file extension for this file. In most cases this should be “PDF.”

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td>REPLACE | RENAME</td><td>Determines the processing involved when a file of the same name is already present in the HS extent. REPLACE overwrites the file

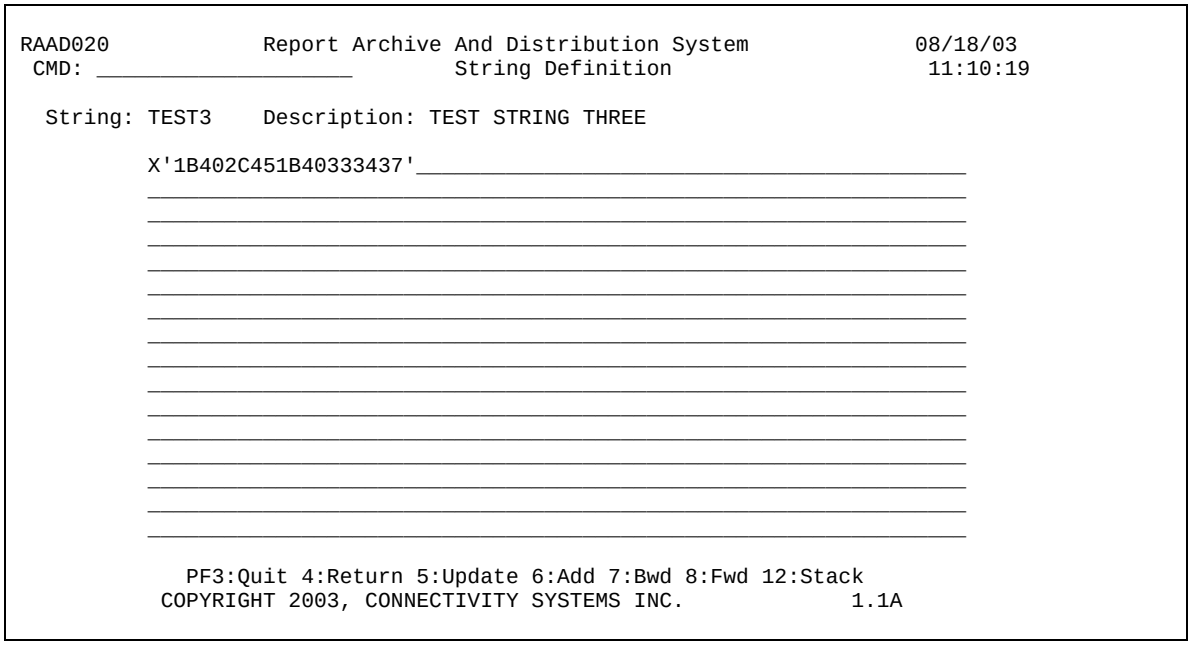
If you specify RENAME, RAAD interrogates the name from right to left looking for the string 000 (zeroes). When it locates the string, RAAD increments this number until a unique name is created. For example, a file name Test File 000 may have several entries on the HFS: Test File 000, Test File 001, Test File 002, etc.</td></tr>
<tr><td>Config</td><td>Use this to indicate the location of the PDF configuration file. This file can be in one of three places: LIBR, RAAD, or as an HFS file. Only one of these options may be selected. The other entry fields depend on the source for the configuration data.

<table>
<tr><td>LIBR</td><td>Enter here the VSE library, sublibrary, and filename of the configuration file. This can be the same file used with TCP/IP for VSE.</td></tr>
<tr><td>RAAD</td><td>Enter here the name of a member in the RAAD JCL Definitions to be used as a configuration file.</td></tr>
<tr><td>HFS</td><td>Provide the fully qualified path name of an HFS file which is to be used as a configuration file for this PDF writer. RAAD assumes that this file resides in the HFS extent named above.</td></tr>
</table>
</td></tr>
</table>

PF Keys

PF Key	Label	Description
PF5	Update	Update the Printer Definition on the RAAD File.
PF6	Add	Add a new Printer Definition to the RAAD File.
PF7	Bwd	Scroll backward to the previous Printer Definition.
PF8	Fwd	Scroll forward to the next Printer Definition.

RAAD String Definition



String Definitions provide a common place for printer strings that can be used in several printer definitions.

Field	Description
String	This is the unique Name for this Printer. String is eight characters long and cannot contain any character including embedded spaces.
Description	Optional free form text description further describing the string.

The string itself occupies the remainder of the display. The string can be a maximum of 1024 characters in length (510 hexadecimal). A hexadecimal string is entered by preceding the string with “x”, as shown in the example screen above.

RAAD Report Format Definition

```
RAAD012            Report Archive And Distribution System            11/20/02
CMD: _____________________       Report Format                       07:28:20
 Id: FORMAT1  Desc: REMOVE SSN
             Lines: From: 0005 To: 0256
  Format By Column: CMD COL LEN COMMENT
                    --- --- --- ----------------------------
                    _   001 022 FIRST PART____________________
                    _   035 122 LAST PART_____________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
                    _   000 000 ______________________________
            PF3:Quit 4:Return 5:Update 6:Add 7:Bwd 8:Fwd 12:Stack
                   COPYRIGHT 2002, CONNECTIVITY SYSTEMS INC.
```

A Format Definition allows you to rearrange and/or restrict certain portions of a report when viewed, printed, or processed using the RAAD Output facility. Use of the Format capability is optional.

The format screen is divided into two parts:

- Identification
- Formatting.

Identification

Field	Description
Id	This is the unique entry ID for this Format. ID is eight characters long and can contain any character including embedded spaces. The first character must be non-blank.
Desc	Optional free form text description to further identify this Format.

Formatting

Field	Description
Lines	The From and To lines of each page that are to be reformatted. Setting the To line to 256 indicates that the remainder of the page is processed according to the format rules below. In the example above, RAAD formats only lines five to the end of the page, the first four lines (page headings) are left as is.
Format By Column	This is a list of the portions of the report that are displayed when using this format. RAAD inserts columns into the report in the order given on this screen. There are four columns in the list: • CMD—Line command can be one of: — 'D'—delete the line — 'M'—move the line — 'A'—insert moved line after this line — 'B'—insert moved line before this line. • Col—First column to be displayed. • Len—Length to be displayed. Like the Lines value above, a length of 256 requests that RAAD display all portions of the report from this column to the end of the report. • Comment—Free form text to describe the report fragment. If you wish to add spaces to the report, you can do so by specifying a column of zero with a non-zero length. It is not necessary to space out the end of the print line since that happens internally in RAAD. To add an entry, simply type in a column, the length, and comment on any empty line. RAAD condenses the list when you press ENTER.

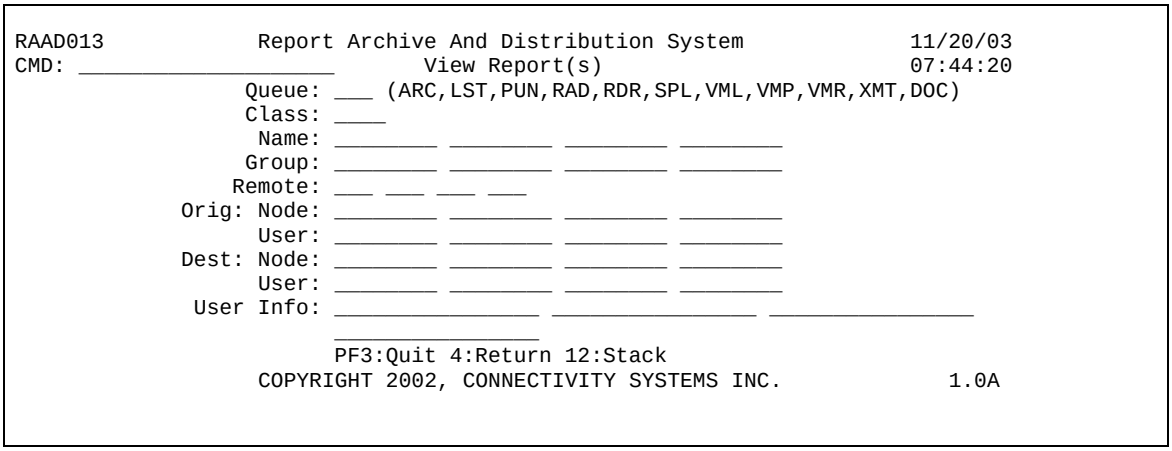
Example

In the example screen above, the resulting report is formatted as columns 1-22 followed immediately by columns 25-122. Any data in the input report contained in columns 23-34 or 123-end-of-line are not displayed.

PF Keys

PF Key	Label	Description
PF5	Update	Update the Format Definition on the RAAD File.
PF6	Add	Add a new Format Definition to the RAAD File.
PF7	Bwd	Scroll backward to the previous Format Definition.
PF8	Fwd	Scroll forward to the next Format Definition.

RAAD View Report(s)



This screen is presented in response to selecting "View Report List" on the RAAD menu. Use this screen to select a queue and, optionally, a subset of the queue for processing. After information is entered here, you proceed to the RAAD Queue Display.

Field	Description
Queue	Enter the Queue you wish to browse here. To the right of the entry area is a list of available queues. The example screen above lists all 11 of the RAAD queues, what you see may differ. See your System Administrator for more information. The value for Queue must be supplied.
Class	You can enter four different classes, or the reserved word "ALL" for all classes in the queue. RAAD displays classes on the RAAD Queue Display in the order given here. If omitted, RAAD uses the default queues specified in your User Profile. **Note:** A special class "FREE" is available for the POWER RDR queue. This class shows actual jobs currently executing or available for execution.
Name	Job Name.
Group	Group is relevant only to ARC and RAD queues. This value is ignored for all other queues.
Remote	Three-digit POWER Remote ID.
Orig. Node	POWER Origin Node or VM Creator.
Orig. User	POWER Origin User or VM Owner.
Dest. Node	POWER Designation Node.

Field	Description
Dest. User	POWER Destination User.
User Info	POWER User Information from the * $$ LST USER= operand.

RAAD View Report

```
RAAD013            Report Archive And Distribution System            11/20/03
CMD: ____________________       View Report(s)                       07:45:55
                  Queue: ___ (ARC,LST,PUN,RAD,RDR,SPL,VML,VMP,VMR,XMT)
                  Class: ____
                   Name: ________ Number: _____
                  Group: ________
                 Remote: ___
             Orig: Node: ________
                   User: ________
             Dest: Node: ________
                   User: ________
              User Info: ________________
               Password: ________
                         PF3:Quit 4:Return 12:Stack
                   COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.            1.0A
```

This screen is presented in response to selecting “View Report” on the RAAD menu. Use this screen to go directly to a single report in one of the RAAD supported queues.

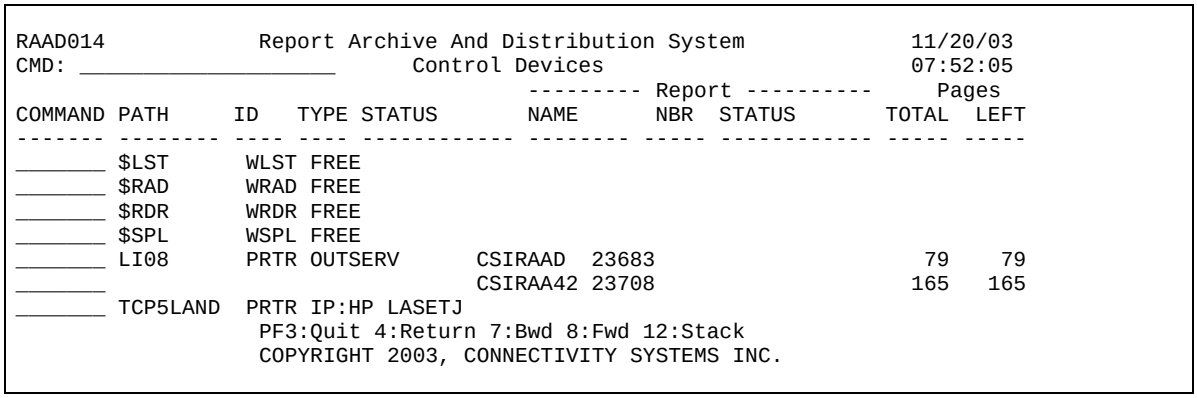
Note: Because of the manner in which data is stored for the ARC, RAD, and SPL queues, you cannot proceed directly to a single report in one of these queues. Instead, you are directed to the RAAD Queue Display, just as if you had selected “View Report List” from the RAAD menu.

Field	Description
Queue	Enter the Queue you wish to browse here. To the right of the entry area is a list of available queues. The screen example above lists all 10 of the RAAD queues, what you see may differ. See your System Administrator for more information. The value for Queue must be supplied.
Class	You can enter four different classes, or the reserved word “ALL” for all classes in the queue. RAAD displays Classes on the RAAD Queue Display in the order given here. If omitted, RAAD uses the default queues specified in your User Profile.

The remaining fields are optional, and if supplied, are used by RAAD to identify the requested report. For each of these fields you can enter one to four values. All except Remote are generic. Generic data value can contain an asterisk (*) to mean any number of characters, or a plus sign (+) to mean any single character.

Field	Description
Name	Job Name.
Group	Group is relevant only to ARC and RAD queues. This field is ignored for all other queues.
Remote	Three-digit POWER Remote ID.
Orig. Node	POWER Origin Node or VM Creator.
Orig. User	POWER Origin User or VM Owner.
Dest. Node	POWER Designation Node.
Dest. User	POWER Destination User.
User Info	POWER User Information from the * $$ LST USER= operand.

RAAD Control Devices



This screen controls the RAAD Devices. Most functions on this screen can be performed on the Queue Display. However, this screen shows activity from a printer and writer perspective as opposed to a report perspective on the Queue Display. You will find this screen particularly useful if you are responsible for controlling RAAD Devices.

The devices are listed in alphabetically according to standard EBCDIC order

Note: RAAD List Devices do not appear on this display.

In addition to RAAD devices, any queued printing requests are also displayed on this screen. The screen capture above displays these values:

- $LST—Writer to the LST queue which is currently free (ready for work)
- $RAD—Writer to the RAD queue which is currently free (ready for work)

- $RDR—Writer to the RDR queue which is currently free (ready for work)
- $SPL—Writer to the SPL queue which is currently free (ready for work)
- LI08—A CICS attached printer that is currently out of service. A report, CSIRAAD, is ready to be printed on the device. Additionally, a second report, CSIRAA42, is waiting for the first job to complete before it can be printed on LI08. This will not happen until LI08 is brought in service.
- TCP5LAND—A TCP/IP Printer named “HP LASET J” is free (ready for work).

Ten fields are displayed for each RAAD Device:

Field	Description
COMMAND	Ten Line Commands are available for each line item. • **DELETE—**Deletes a queued report. If entered on the printer line, this command operates the same as the FLUSH command. • **EDIT**—Proceeds to the Printer Definition for this RAAD Device. • **FLUSH—**Stops printing and performs whatever final processing would normally take place had the report been allowed to complete. • **GO**—Starts a printer that is waiting for a forms-mount or that has been suspended using the SUSPEND command. • **PURGE**—Deletes a queued report. If entered on the printer line, this immediately stops printing and frees up the associated RAAD device. • **RESTART**—If entered for a printer that is currently SUSPENDED or waiting for Forms Mount, the command functions the same as GO. Otherwise, this command attempts to restart the printing process for the current report associated with the RAAD Device. • **SETUPn**—This command can only be issued when the Device is waiting for a forms-mount. This causes RAAD to generate *n* setup pages, where *n* can be any number from 1 to 9. The generated pages have all alphabetic characters translated to an "X" and all numeric characters translated to a "9." This command can be issued as many times as needed. When the forms have been aligned properly, use the GO command to begin the actual printing. • **START**—Same as the RESTART command. • **STOP—**Stops printing a report on the specified printer or writer without altering or deleting the report in the Spool Queue. After the report has stopped printing, the next report to be printed starts. However, if the report being printed was started by "Automatic Routing," Abnormal Completion Processing is performed on the report. • **SUSPEND**—Temporarily halts the Device with the expectation that printing will resume shortly.
PATH	This is the name that can be entered in the PRINTER field of the Queue Display to access this RAAD Device.
ID	Reserved for compatibility with BIM-PRINT.

Field	Description
TYPE	Identifies the type of RAAD device. Can be one of the following: • PRTR—Printer • WLST—Writer to POWER LST • WPUN—Writer to POWER PUN • WRAD—Writer to RAD • WRDR—Writer to POWER RDR • WSPL—Writer to RAAD SPL Queue.
STATUS	Current Printer status. This can be one of the following: • **ACTIV (XXXX)—**There is an active task on this Device. The CICS transaction ID is shown in parentheses. If there is an active task, RAAD Polling does not attempt to dispatch a report to this Device. • **FREE**—Ready for work. • **NEXT (XXXX)**—There is a Next Transaction on the Device (a CICS transaction returned using EXEC CICSRETURN TRANSID (xxxx)). If there is a next transaction for the device, RAAD Polling does not attempt to dispatch printing. • **NO TCTTE**—There is no corresponding TCTTE entry for this Device. In this case, RAAD Polling cannot attempt to dispatch printing to this device. • **NOT ACQ**—Device has not been acquired by VTAM. This condition automatically corrects itself when RAAD attempts to dispatch printing to the Device. • **OUTSERV**— Device is out of service. Use the CEMT transaction to place the device back in service and RAAD will begin to use the device. • **PRINTING**—Device is currently printing RAAD output. • **START (XXXX)**—A Start exists for this device. The started transaction is shown in parentheses.

Field	Description
REPORT	There are five pieces of information displayed for any reports shown on this display. • **NAME**—Job name of report being printed or queued. • **NBR—**Job number of report. • **STATUS**—Can be one of the following: — PRINTING—Report being printed — SUSPENDED—Report is suspended — FORM>xxxx—Printer waiting for forms mount. • **TOTAL**—Total number of lines or pages to be printed. If the Device was started by page, then this is a page count. If the Device was started by Line, then this is a line count. • **LEFT**—Total number of lines or pages that remain to be printed.

In addition to the commands listed for the PF keys, the Command Line at the top of the screen recognizes the following command:

`START pppp`

where *pppp* is a RAAD Device.

The START command causes the display to be positioned beginning with the device given in the START command. RAAD displays the rest of the devices in alphabetical order. This command can be useful for installations with many devices defined to RAAD.

RAAD System Status

```
RAAD015            Report Archive And Distribution System            11/20/03
CMD: ____________________       System Status                        07:52:48

                        RAAD SYSTEM ACTIVE OPEN STARTED
         External Device Writer: WAIT CN   _ Inactivate
                Spooler Polling: ACTIVE    _ Inactivate
           CGI (Web) Interface: INACTIV   _ Activate
               Cross Partition: ACTIVE    _ Inactivate
                       TCP/IP: INACTIV   _ Activate
                         XPCC: ACTIVE    _ Inactivate
                  Daily Reports:           _ Start
                    Daily Purge:           _ Start
                             PF3:Quit 4:Return 12:Stack
                   COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.            1.0A
```

This screen shows the status of the RAAD system at a glance. In addition, you can activate or deactivate all or part of the RAAD processes. On the fourth line of the display, is a system summary line. This line can take on several values, as illustrated below:

```
                    | ACTIVE   | | OPEN   | | STARTED |
        RAAD SYSTEM |          | |        | |         |
                    | INACTIVE | | CLOSED | | STOPPED |
```

Each of the values has a meaning within the system. See the table below for an explanation of the values:

Value	Meaning
ACTIVE/INACTIVE	Indicates whether RAAD is active or not. You can temporarily inactivated RAAD for batch processing or emergency situations. See QUIES in the Commands table below for more information.
OPEN/CLOSED	Indicates whether the RAAD dataset is open or closed. You will not be able to get to this screen if the dataset is closed, but you can close it from here if so desired. **Note:** If the dataset is closed, RAAD will refuse to let you exit this screen.
STARTED/STOPPED	Indicates whether the RAAD system has been started or if it is currently in stopped state.

Use the command line to control RAAD using the following commands:

Command	Description
CLOSE	Closes all RAAD files. You cannot exit the System Status display while the files are closed.
CONFIG	Proceeds immediately to the System Configuration Display.
END	Stops all RAAD processes. The files remain open.
OPEN	Opens the RAAD files and activates the system.
QCOPY	Starts the QCOPY Scheduling Process.
QUIES	Quiesces, or inactivates, the RAAD system. When in Quiesced, state, RAAD automated processes are suspended and no I/O activity to the RAAD dataset takes place. **Note:** Since CSIQCOPY jobs accessing RAAD information time out in two minutes when the system is Quiesced, use care when executing this command.

Command	Description
REPORT	Causes RAAD to generate its file report. This report is named "RAADREPT" and is found in the RAD queue in the "$LOG" group.
RESTART	Restarts RAAD by performing the same processing that is done during CICS startup through the PLTPI. This involves extensive file operations and can take several seconds to complete. **Note:** You will not need to use this option during normal operation but may be asked to use it by CSI Technical Support.
RESUME	Reactivates or restarts the system.
START	Starts RAAD by initiating the automated processes.
STOP	Stops RAAD automated processes but does not quiesce the system.
VERIFY	Used on RAAD installation to verify that all programs, transactions, and files are installed correctly. You may also be asked to perform this function by CSI Technical Support. This function can take a few seconds to complete. When finished, the function places a report in the RAAD, group '$LOG' named 'RAADSTAT.'
XREF	Generates the RAAD Cross Reference Report. This report is placed into the RAD queue, in group $LOG and named "RAADXREF."

When these commands are issued, you may receive the "COMMAND NOT ALLOWED" error response. This message appears when you attempt to issue one of the commands above when the system is in an improper state to process the command. An example is issuing the "START" command when the system has not been previously "STOPPED."

The body of the screen allows you to verify and control the state of the various processes of the RAAD system. Each line is composed of three parts:

- Name—The name of the RAAD process
- Status—The current Status of the RAAD process
- Action—Activate or inactivate control.

RAAD Process Name	Status	Status Descriptions
External Device Writer	INACTIV	External Device Writer is not started in CICS.
	WAIT CN	External Device Writer is started in CICS and is awaiting activation at the VSE Console.
	ACTIVE	External Device Writer is started in CICS and accepting jobs from VSE/POWER.
Spooler Polling	INACTIV	Spooler Polling is not active.
	ACTIVE	Spooler Polling is active and periodically scanning your spooler queues.
CGI (Web) Interface	INACTIV	Web Access to RAAD is unavailable.
	ACTIVE	Web Access to RAAD is available.
Cross-Partition	INACTIV	Cross partition access to RAAD is not available.
	ACTIVE	Cross partition access to RAAD is available.
TCP/IP	INACTIV	TCP/IP cross partition access to RAAD is unavailable.
	ACTIVE	TCP/IP cross partition access to RAAD is available.
XPCC	INACTIV	XPCC cross partition access to RAAD is unavailable.
	ACTIVE	XPCC cross partition access to RAAD is available.
Daily Reports	“ “	Daily Reports are not running.
	RUNNING	Daily reports are currently running. It can take several seconds for the Daily Reports to complete.
Daily Purge	“ “	Daily Purge is not running.
	RUNNING	Daily Purge is currently running. Depending on the size of the RAAD dataset, it can take several minutes for the Daily Purge to complete.

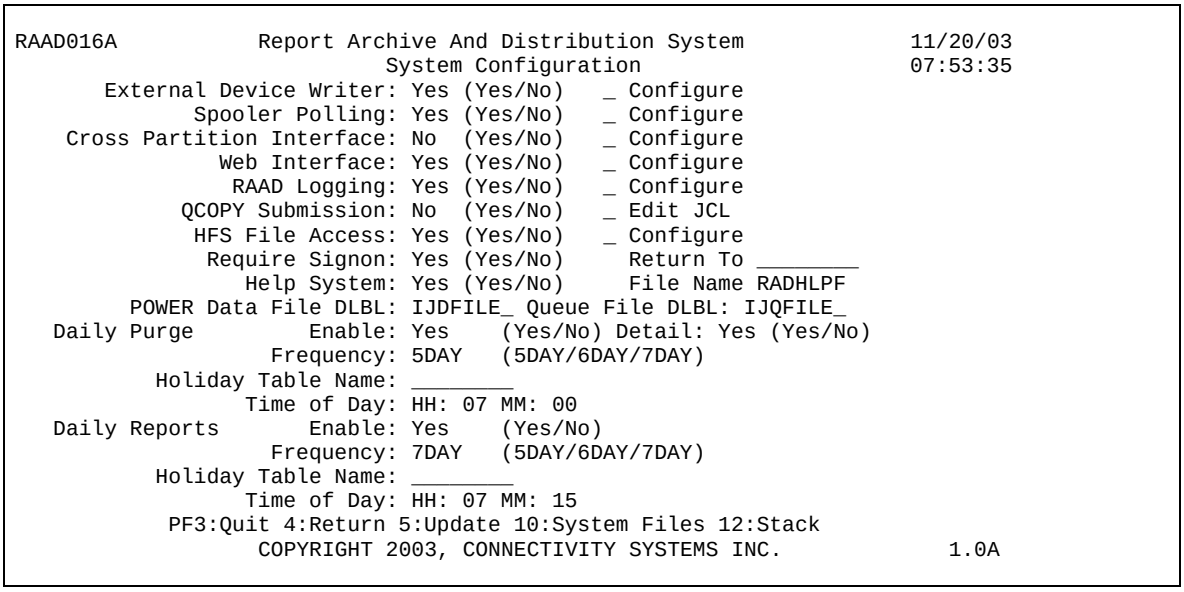
RAAD also supplies a whole group of traces. These traces were primarily intended to debug RAAD during development and to simplify remote support for CSI Technical Support. Some of them, however, can be useful to you in your use of the RAAD system. Each trace generates a RAAD report in group '$LOG' as described in the table below:

Command	Report	Description
TRACE ON	TRACESTD	Turns on the Spooler Polling Trace. This trace is useful to determine why a report is not being selected by Polling.
TRACE OFF	TRACESTD	Turns off the Spooler Polling Trace.
TRACE DAI	TRACEDAI	Toggles the Daily Purge trace on and off. This trace contains data for CSI Technical Support as well as general information that can be used to determine why a report is not being deleted.
TRACE MAT	TRACEMAT	Toggles the RAAD Writer trace on and off. This trace is a mixture of data for CSI Technical Support as well as general information that can be used to determine why a report has been selected or not selected by the RAAD External Device Writer.
TRACE SPL	TRACESPL	Toggles the RAAD SPL trace on and off. This trace can be useful to both CSI Technical Support and you to help debug problems with your CICS applications that write to the SPL queue. The full buffer supplied to RAAD is dumped in the trace.
TRACE BUF dvce	TRCEdvce	Toggles the RAAD Printer Buffer Trace on and off. To turn the trace on, supply the RAAD device name on the command line. Omit the device name to turn the trace off. This trace dumps the entire contents of each buffer directed to the RAAD device. **Note:** This is for non-TCP/IP printers only.

Command	Report	Description
TRACE IPBUF dvce	TRCEdvce	Toggles the RAAD IP Buffer Trace on and off. To turn the trace on, supply the RAAD device name on the command line. Omit the device name to turn the trace off. **Note:** This trace is intended for the exclusive use of CSI Technical Support.
TRACE IPSEND dvce	TRCEdvce	Toggles the RAAD IP Send Trace on and off. To turn the trace on, supply the RAAD device name on the command line. Omit the device name to turn the trace off. Trace shows the exact contents of each send and receive for the device. This trace can be useful in debugging problems with printing to TCP/IP devices in your network.
TRACE XDW	TRACEXDW	Toggles the RAAD External Device Writer Trace on and off. **Note:** The RAAD External Device Writer Trace is intended for the exclusive use of CSI Technical Support.
TRACE XPC	TRACEXPC	Toggles the RAAD Cross Partition Trace on and off. **Note:** The RAAD Cross Partition Trace is intended for the exclusive use of CSI Technical Support.

For several of these traces (DAI, MAT, SPL, XDW and XPC), entering the command once turns the trace on and entering it a second time turns off the trace. Since it can get confusing as to whether a trace is on or off, an additional trace command, 'TRACE INQ,' is supplied which lists the currently active traces at the bottom of the System Status screen.

RAAD System Configuration



Use the System Configuration screen to setup and maintain your RAAD system.

At the top of the screen are six configuration options that all work in a similar way. These options are used to enable the various components of the RAAD system. Each can be enabled or disabled by keying either “Yes” or “No” in the associated column. Further customization is available for these options by entering any character next to “Configure” or “Edit JCL” and pressing ENTER. The nine options are:

- External Device Writer—Controls the External Device Writer component of RAAD.
- Spooler Polling—Controls the Spooler Polling component of RAAD.
- Cross-Partition Interface—Controls the Cross-Partition Interface to RAAD.
- Web Interface—Controls the Web Interface of RAD.
- RAAD Logging—Controls the RAAD Logging System.
- QCOPY Submission—Provides a skeleton JCL deck for QCOPY submission.
- HFS File Access—Controls use of the DOC queue component of RAAD.
- Require Signon—Yes/No switch controls the Sign On Display.
- Help System—Controls the online Help component of RAAD.

The “Require Signon” and “Help System” options have additional configuration on this screen.

Field	Option	Description
Require Signon	Yes/No	Determines whether Sign On is required for RAAD. A "YES" indicates that the sign on process is required. A "No" indicates that the sign on process is not required, If the sign on process is not required, RAAD constructs its User ID from the user id associated with this terminal by CICS.
Return To		This is the name of a user written CICS program that receives control from RAAD whenever RAAD is exited. Control is passed via an EXEC CICS XCTL with no COMMAREA.
Help System	Yes/No	Determines whether the online help system is available.
File Name		This is the name of the help file. See "Installation Step 10: RAAD Help File," page 194, for more information. **Note:** To utilize either the Help System or HFS File Access, you must load phase CSIHF00 into the SVA. See "Installation Step 8c: SDL Transient", page 193, for more information.

Enter the POWER Data File and Queue File DLBL names below the components. These are defaulted to IJDFILE and IJQFILE respectively. In order to access the POWER queues in RAAD, you must add DLBL and EXTENTS for these files to the CICS system running RAAD. If the File names on the DLBL statements are different than standard, enter the proper names here.

Finally, this screen allows you to customize the RAAD Daily Purge and RAAD Daily Report processes. With only one exception, the two customizations are identical and are described once below with the exception noted.

Field	Description
Enable	Yes/No switch. Yes enables the report.
Detail	Available for Daily Purge only. A "Yes" value causes detail lines for each report deleted to be printed in the daily RADPURGE report. Specify "No" to suppress the details.

Field	Description
Frequency	Determines the days on which the report process is to be run. The field value can be one of the following: • 7DAY—Seven day week, Sunday-Saturday • 6DAY—Six day week, Monday-Saturday • 5DAY—Five day week, Monday-Friday • SUN—Sunday only • MON—Monday only • TUE—Tuesday only • WED—Wednesday only • THU—Thursday only • FRI—Friday only • SAT—Saturday only.
Holiday Table Name	The name of a separately assembled CICS phase that can be used to identify holidays. RAAD reports are not generated on a holiday. See “Holiday Table,” page 135, for more information.
Time of Day	The time of day to run the report in hours and minutes. Hours are specified in military time (00-23) and minutes can be 00-59.

In addition, you can press PF10 to view and or maintain the RAAD System Files.

External Device Writer Configuration

```
RAAD016B           Report Archive And Distribution System            11/20/02
                             External Device Writer                  07:55:39
                       ID  RAAD____
    Default Disposition: Accept: Yes (Yes/No)  Retention 00003 Group  DEFAULT_
     Default Completion: ACT C D P S REM DST.NODE DST.USER
                 Normal: Dsp _ _ _ _ ___ _________ _________
               Abnormal: Alt _ H _ _ ___ _________ _________
     POWER Destinations:    RAAD____ LOCAL___ _________ _________
                            _________ _________ _________ _________
  POWER Buffer Size (K): 048
                          PF3:Quit 4:Return 5:Update
                    COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.             1.0A
```

When a character is entered in the “External Device Writer Configure” field on the System Configuration screen, you are presented with this screen. This screen is used to control the execution of the External Device Writer component of RAAD. The screen is broken into five parts:

- Identification
- Default Disposition
- Default Completion
- POWER Destinations

- POWER Buffer Size.

Identification

You need to supply an ID for the External Device Writer. The ID can be up to eight alphabetic characters. The default is "RAAD." This ID is used at the VSE console and provides the connection between VSE/POWER and RAAD. See "Controlling the External Device Writer," page 143, for more information.

Default Disposition

These fields determine the processing actions of the RAAD External Device Writer when an input report cannot be matched to any Catalog Definition.

Field	Description
Accept	Yes/No switch. If "YES" is specified, RAAD writes the report to the RAAD Dataset using the retention period and Group Name specified below. If "NO" is specified, RAAD processes the report through ABNORMAL completion as specified below.
Retention	Enter the number of days you wish to keep these reports. This number is added to the current date to determine the expiration date of the report. For example, if RETENTION is specified as 3, a report added to the RAAD Dataset on May 8th will expire on May 11th
Group	Enter the Group Name for these reports that are not matched to a catalog. You can process this group in the same manner as any other group.

Default Completion

These fields control how the RAAD External Device Writer handles input POWER Queue entries. There are two types of completion processes:

- NORMAL—The report was successfully written to the RAAD Dataset.
- ABNORMAL—The report was not written.

For each completion type, there are eight fields you can enter:

Field	Description
ACT	Specifies whether the report is deleted, altered, or left as it is. One of the following values can be specified: • DEL—The report is deleted. • DSP—The report is altered or deleted depending on its disposition. Reports with a disposition of "D" are deleted. Reports with a disposition of "K" are altered to a disposition of "L." • ALT—The report is altered to the values specified in the remaining fields. • LEV—The report is left as is in the queue.. **Note:** The LEV option should only be specified for ABNORMAL processing. If LEV is specified for NORMAL processing, the report prints repeatedly until it is deleted from the queue through some other means.
CLS	Used with ALT to specify the class to which the report is altered. If left blank, the class is not changed.
DSP	Used with ALT to specify the disposition to which the report is altered. If left blank, the disposition is not changed.
PRI	Used with ALT to specify the priority to which the report is altered. If left blank, the priority is not changed.
SYS	Used with ALT to specify the SYSID to which the report is altered. If left blank, the SYSID is not changed.
REM	Used with ALT to specify the Remote ID to which the report is altered. If left blank, the Remote ID is not changed.
DEST	Used with ALT to specify the POWER Destination Node to which the report is altered. If left blank, the Destination Node is not changed.
USER	Used with ALT to specify the POWER Destination User to which the report is altered. If left blank, the Destination user is not changed.

POWER Destinations

POWER directs Queue entries to the External Device Writer according to the same rules that are in effect for physical printers. If a physical printer is started with a destination name, only reports whose destination matches the destination(s) for the physical printer are printed.

When starting the RAAD External Device Writer, a destination is specified in the POWER Command. This destination serves a dual purpose:

- It identifies the destination of the reports that you wish POWER to direct to the External Device Writer, and
- It is also the name used for additional POWER Commands.

For example:

```
S DEV,JONES5,RAAD,...
```

tells POWER to direct reports with a destination of “JONES5” to the External Writer “RAAD,” and to control the writer under the name of “JONES5.” RAAD allows up to seven additional destinations for access to the External Device Writer. If you use the word “LOCAL,” local reports as well as reports with destination of “LOCAL” are accepted.

POWER Buffer Size

You can use this Operand to specify the size of the data buffer that RAAD uses when communicating with POWER. The number specified is in multiples of 1024 bytes (1 K). The minimum value is 1 and the maximum is 32. This parameter affects both the GETVIS used by POWER in its partition and dynamic space utilized by the RAAD POWER External Device Writer.

Spooler Polling Configuration

```
RAAD016C           Report Archive And Distribution System            11/20/03
                              Spooler Polling                        07:56:19
       Polling Interval: HH: 00 MM: 01 SS: 00 (15 second minimum)
     Default Completion: ACT C D P S REM DST.NODE DST.USER
                 Normal: Alt Z _ _ _ ___ ________ ________
               Abnormal: Alt Z _ _ _ ___ ________ ________
            Poll Queues: LST PUN RDR SPL VML VMP VMR XMT ___ ___
                         PF3:Quit 4:Return 5:Update
                  COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.             1.0A
```

When a character is entered in the “Spooler Polling Configure” field on the System Configuration screen you are presented with this screen. This screen is used to control the execution of the Spooler Polling component of RAAD. The fields on the screen are:

Field	Description
Polling Interval	In this field, enter the Hours, Minutes, and Seconds for the interval between Spooler Polling Scans. Typically, this is one minute. RAAD enforces a minimum of 15 seconds for the Polling Interval.

Field	Description
Default Completion	If a Spooler Polling record does not contain completion information, Spooler Polling uses the completion specification given here. There are two types of completion processes: • NORMAL—The report was successfully processed by Spooler Polling. • ABNORMAL—The report was not successfully processed. Completion information is specified the same as that shown above for the External Device Writer.
Poll Queues	This is a list of the RAAD queues that are to be polled. The list can contain: • LST—VSE/POWER List Queue • PUN—VSE/POWER Punch Queue • RDR—VSE/POWER Reader Queue • SPL—RAAD Internal Spooling Queue • VML—VM List Queue • VMP—VM Punch Queue • VMR—VM Reader Queue • XMT—VSE/POWER Transmit Queue. Spooler polling cannot be used for either the RAD (RAAD dataset) or ARC (BIM-ARCHIVE) queues. You can remove a queue from the list by either pressing ERASE-EOF or spacing out the relevant queue name. To re-enable a queue, key in its three character ID on an empty slot. You can use this field to temporarily suspend polling for a specific queue. RAAD will not poll a queue unless it is enabled here. This feature is useful in emergencies.

Cross-Partition Interface Customization

```
RAAD016D           Report Archive And Distribution System            11/20/03
                         Cross Partition Interface                   07:57:10
              Use TCP/IP: No  (Yes/No)  Port: 05050
            Use VSE XPCC: Yes (Yes/No)  Cross-Partition ID: CSIRAAD_
                      PF3:Quit 4:Return 5:Update
                 COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.             1.0A
```

When a character is entered in the “Cross Partition Interface Configure” field on the System Configuration screen, you are presented with this screen. This screen is used to control the execution of the Cross Partition component of RAAD.

RAAD recognizes two methods of communication between partitions: TCP/IP and XPCC. You can select one or the other, or both. Selection is performed using a Yes/No

setting on the relevant line on this screen. In addition, each method has an additional field that can be customized.

Field	Description
TCP/IP Port	The default is 5050. You can use any port you wish. If you change this setting, you must also inform CSIQCOPY of the change. See the OPTION parameter in the *CSI-QCOPY Installation and Operations Guide* for more information.
XPCC Cross-Partition ID	The default is "CSIRAAD." This is the eight-character name used by VSE to connect partitions together using VSE's XPCC capabilities. If you change this setting, you must also inform CSIQCOPY of the change. See the OPTION parameter in the *CSI-QCOPY Installation and Operations Guide* for more information.

Web Interface Configuration

```
RAAD016E          Report Archive And Distribution System          03/24/04
                              WEB Interface                       11:58:05
        Skeleton HTML Document: $WEBSKEL Edit: _
                    TCP/IP Port: 08078 SysId: 01
           Expiration Interval: 00 15 00 (HH MM SS)
              Background Color: 00FFFF
                    Menu Color: FFFF00
                       PF3:Quit 4:Return 5:Update
                    COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.          1.0A
```

When a character is entered into the "WEB Interface Configure" field in the System Configuration screen, you are presented with the screen shown above. This screen is used to control the processing in the Web interface to RAAD.

You must supply a skeleton HTML document for all access to RAAD through the web. This document is named "$WEBSKEL." You can edit/create from this screen by keying any character in the "Edit" field and pressing ENTER. At a minimum, this skeleton HTML document must contain the following:

```
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 4.0//EN">
<HTML>
<HEAD>
    <META HTTP-EQUIV="CONTENT-TYPE">
</HEAD>
<BODY BGCOLOR="WHITE" TEXT="BLACK" TOPMARGIN="0">
#INSERT
</BODY>
</HTML>
```

RAAD inserts its HTML code at the point where the "#INSERT" is found.

Note: "#INSERT" must begin in column 1. You can place any HTML appropriate to your installation ahead of or following the "#INSERT" as needed. Unpredictable results will occur if you attempt to use the HTML "<FORM>" tag.

The remaining fields on this screen are:

Field	Description
TCP/IP Port	The default is 8078. You can provide any port number you want. RAAD listens on this port for web activity and responds accordingly. For example, using your browser, you can access RAAD with a hyperlink that looks like: `HTTP://001.002.003.004:port/RAAD` where port is the number you establish in this field.
TCP/IP SysId	This is the TCP/IP SysId for the Web interface.
Expiration Interval	As an additional security provision, a RAAD session automatically expires after the time interval you establish here. The time interval is entered in hours, minutes, and seconds and the default is 15 minutes.
Background Color	This is the RGB value for the HTML color for the RAAD background. The default is 00FFFF or CYAN (AQUA). Consult HTML documentation for assistance.
Menu Color	This is the RGB value for the HTML color used for the RAAD menu and Table Headers. The default is FFFF00 or YELLOW. Consult HTML documentation for assistance in changing these colors.

RAAD Logging Customization

```
RAAD016G          Report Archive And Distribution System          11/20/03
                              RAAD Logging                        07:58:30
               User Signon      Yes  (Yes/No/Cnsl/Both)
               Record Updated   Yes
               Record Deleted   Yes
               Record Added     Yes
               Report Viewed    Yes
               Report Deleted   Yes
               Report Altered   Yes
               Report Released  Yes
               Program Abends   Yes
               Program Errors   Yes
               Report Printed   Yes
               SPL Reports      Yes
               QCOPY Outputs    Yes
               System Control   Yes
                        PF3:Quit 4:Return 5:Update
                   COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.          1.0A
```

When a character is entered in the "RAAD Logging Configure" field on the System Configuration screen, you are presented with this screen. This screen allows you to specify which log messages RAAD generates and consequently what messages appears on the RAAD Daily report.

In general, each of the Log Message types can have one of four states:

- Yes—Messages are directed to the RAAD log.
- No—Messages are not directed to the RAAD log.
- Cnsl—Messages are directed to the VSE Console but not to the RAAD log.
- Both—Messages are directed to both the VSE Console and the RAAD log.

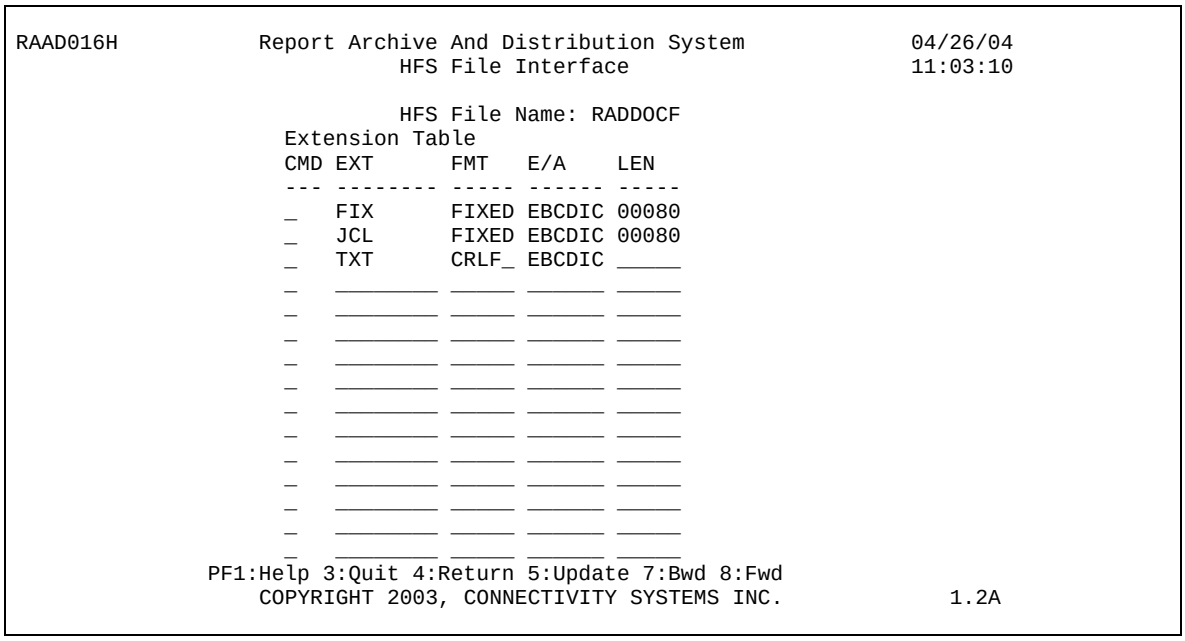
If a message is not directed to the RAAD log, it does not appear in the Daily Report.

Note: Messages for "Program Abends," "Program Errors," and "System Control" cannot be set to "No." If you attempt to set any of these to "No" RAAD will change your requested state to "Yes."

RAAD log messages begin with the date and time of the message. The RAAD User ID follows for most message types. Following the User ID, the contents of the message varies depending on the message type. Sample Messages are show below:

Message Type	**Sample Message**
User Signon	`11/22/02 07:45:00 BIM SIGNED ON TO RAAD`
Record Updated	`11/22/02 07:45:11 BIM POLLING RECORD UPDATED KEY=RAADASM`
Record Deleted	`11/22/02 07:45:41 BIM INPUT RECORD DELETED KEY=RAADGEN`
Record Added	`11/22/02 07:45:41 BIM INPUT RECORD ADDED KEY=RAADGEN`
Report Viewed	`11/22/02 06:56:24 BIM REPORT VIEWED QUE=RAD,JOB=RADAILY ,00014`
Report Deleted	`11/22/02 07:46:28 BIM REPORT DELETED QUE=LST,JOB=CSIRAA16,28189`
Report Altered	`11/22/02 07:46:10 BIM REPORT ALTERED QUE=LST,JOB=CSIRAA16,28189`
Report Released	`11/22/02 07:46:10 BIM REPORT RELEASED QUE=LST,JOB=CSIRAA16,28189`
Program Abends	`11/27/02 08:08:55 RAAD:CSIRAA92 ABEND ASRA OCCURRED IN PROGRAM CSIRAA93`
Program Errors	`11/22/02 11:30:22 CSIRAA93-116 Invalid JCL BY ADDRESS`
Report Printed	`11/02/02 07:54:13 BIM TN33 REPORT PRINTED QUE=RAD,JOB=RADAILY, 00022`
SPL Reports	`11/22/02 06:22:37 SPL REPORT GENERATED AT TERM=TN33 TRANSACTION=TSTS`
QCOPY Outputs	`11/22/02 09:04:10 QCOPY REPORT(RAAD001 ) JNM=RAAD001`
System Control	`11/22/02 06:50:56 CSIRAA99-000 XPCC CROSS PARTITION ACCESS STARTED`

HFS File Interface



This screen is used to control the HFS File Interface for the DOC queue. There are two parts to this screen:

- HFS File Name–specify the DLBL name of the DOC queue, and
- Extension Table–used to establish formatting rules for the file extension.

To add an entry to the extension table, key in the extension and format information. To delete an entry, either space out the extension or enter a “D” in the CMD column. When you update this information, the extensions are sorted.

Field	Description
EXT	The eight character extension name. This name can contain embedded spaces. The first character must be non-blank.
FMT	The format for files of this extension. Format can be one of: • CRLF—CRLF delimited text • FIXED–fixed length, LEN must also be supplied • LENCC–Variable length, carriage control, data • VAR-Variable length with 2 bytes of length followed by data • VAR1—Variable length where the length does not include itself
E/A	Either EBCDIC or ASCII.
LEN	Length of line. This is required for format FIXED and ignored for all others

Formatting rules are used when a DOC queue entry is viewed or printed. The default View/Print is in hexadecimal format. They are also examined when reports are placed on the DOC queue by a writer device.

RAAD System Files Display

```
RAAD016F           Report Archive And Distribution System            11/20/03
                                RAAD Files                           08:00:04
           System Control File Name: RAADFIL
          Catalog Control File Name: RAADCFL
                     Data File Name: RAADDFL
           Temporary File File Name: RAADTFL
Secondary File List
          CMD Name     Description
          --- -------- ------------------------------------------
          _   RADDFL1_ DATA FILE FOR RAADASM GROUP_________________
          _   _________ _____________________________________________
          _   _________ _____________________________________________
          _   _________ _____________________________________________
          _   _________ _____________________________________________
          _   _________ _____________________________________________
          _   _________ _____________________________________________
          _   _________ _____________________________________________
          _   _________ _____________________________________________
          _   _________ _____________________________________________
                PF3:Quit 4:Return 5:Update 7:Bwd 8:Fwd
                 COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.             1.0A
```

When you press PF10 on the System Configuration screen, you are presented with this screen. You can use this screen to establish the names for the files used by RAAD. There are four primary files in RAAD:

File Name	File	Description
RAADFIL	System Control File	Contains RAAD configuration data. This file name cannot be changed from this screen. If the file name needs to be changed to something other than “RAADFIL,” contact CSI Technical Support for assistance.
RAADCFL	Catalog Control File	Contains the RAAD Report Directory.
RAADDFL	Data File	Default for storing data in RAAD.
RAADTFL	Temporary File	Temporary Work file.

The name you supply must be the same as in the DLBL and CICS FCT.

The Secondary File List is necessary in order for RAAD to properly open and close the database in response to a batch ENABLE or DISABLE command. RAAD allows you to specify separate data files by Group. See “RAAD Catalog Definition,” page 40, for more information. RAAD maintains this list as it encounters these file names.

For the most part, you do not need to worry about the Secondary File List. You can, if desired, add descriptive comments to the files in the list by keying data into the Description field in the list.

You can also delete entries by entering a “D” in the CMD column.

Note: Use caution when deleting files. Unpredictable results may occur if a file is in actual use but not present in this list.

RAAD JCL Edit

```
RAAD017            Report Archive And Distribution System             11/20/03
Cmd: _____________________                                            07:29:56

Name: RAAD001_ Desc: GENERATED BY RAAD 11/19/02______             LINE  1( 52)
0...+....1....+....2....+....3....+....4....+....5....+....6....+....7.. CMD
* $$ JOB JNM=RADQCOPY,CLASS=W,DISP=D                                    *===*
* $$ LST CLASS=L                                                        *===*
// JOB RADQCOPY                                                        *===*
// ASSGN SYS020,02F                                                    *===*
// LIBDEF *,SEARCH=BIMLIB.T                                            *===*
// EXEC CSIQCOPY,SIZE=(CSIQCOPY,64K)                                   *===*
 OPTION STATS(SYSLST)    -                                             *===*
        SUMMARY(SYSLST)  -                                             *===*
        DFILE(BIFPWRD)   -                                             *===*
        QFILE(BIMPWRQ)                                                 *===*
:                                                                      *===*
; ******** RAAD GENERATED QCOPY PARAMETERS INSERTED HERE               *===*
TRANSFER ( -                                                           *===*
  INPUT ( RAD /* RAAD001 RAAD TEST REPORT 1   */ -                     *===*
          NAME ( FIRST RAAD001  ) -                                    *===*
          GROUP ( RAADTST  ) -                                         *===*

             PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 12:Stack
                   COPYRIGHT 2002, CONNECTIVITY SYSTEMS INC.
```

When using the Output Process of RAAD you must have a skeleton JCL deck named “$QCOPY.” You can optionally, key your own JCL for any of the Outputs defined to RAAD. In each instance, the JCL Editor is used to maintain the JCL decks. There are two parts to the screen:

- Identification
- Editor.

Identification

Field	Description
Name	This is the unique Name for this JCL deck. Name is eight characters long and can contain any character including embedded spaces. The first character must be non-blank.

Field	Description
Desc	Optional free form text description to further identify this Report. The current line and number of lines in the JCL deck are shown to the right of the Description.

Editor

The first 72 columns of the editor is free form text for entry of JCL statements. The editor translates data to upper case. It is your responsibility to ensure that this text is properly formatted for VSE Job Control.

On the right is a CMD area. The CMD area can take the following line commands:

Function	Line Command	Description
move	M or Mnn	(*nn* = number of lines to move)
	V Vnn	(move, extend)
	MM	(block move)
	VV	(block move, extend stack)
copy	C or Cnn	(*nn* = number of lines to copy)
	K Knn	(copy, extend stack)
	CC	(block copy)
	kk	Block copy, extend stack
delete	D or Dnn	(*nn* = lines to delete)
	DD	(block delete)
new lines	I or Inn	(*nn* = number of lines to insert)
after	A or Ann	(*nn* = number of times to insert stack)
before	B or Bnn	(*nn* = number of times to insert stack)
repeat	R or Rnn	(*nn* = number of times to repeat)
	" or "nn	(*nn* = number of times to repeat)
	RR or ""	(block repeat, start)
	RR or RRn	(block repeat, end, *n* = number of times to repeat block)
	"" or ""n	

Function	Line Command	Description
shift left	< or <nn	(*nn* = number of characters to shift left)
	<<	(block shift left, start)
	<< or <<n	(block shift left, end, *n* = number of characters to shift left)
shift right	> or >nn	(*nn* = number of characters to shift right)
	>>	(block shift right, start)
	>> or >>n	(block shift right,end, *n* = number of characters to shift right

RAAD Queue Display

```
RAAD040            Report Archive And Distribution System            11/20/03
CMD: ____________________  Queue Display Queue=LST                   07:47:09
Printer: ____                                                          PAGES
CMD JOB NAME  NBR  CDP S REM FORM  FROM     TO  USER-INFO PASSWD  CC PRTR  LEFT
--- -------- ----- --- - --- ---- ------ ------ ---------------- --- ---- -----
     DMPINF04    62 AD3                1      1
     UD52171   1461 AD3                1     55
     UD52171   1471 AD3                1     49
     BIMCNSOL  8866 AD3                1      4
     STARTVCS 13923 AD3                1      5
     PCSLOG   15606 AD3                1      3 SNGL PCSLOG
     TSTESA27    61 AD3                1    178 MKJ
     FAQSAO   16420 AD3                1      3 SNGL FAQSAO
     FAQSAO   16421 AD3                1      6 SNGL FAQSAO
     S1TSCNV  18174 AD3                1     14
     DOSVSDMP 18663 AD3                1      5 EKEHLER
     S1TSCNV  21120 AD3                1     14
     S1TSCNV  21122 AD3                1     14
     S1TSCNV  21123 AD3                1     14
     S1TSCNV  21124 AD3                1     14
     S1TSCNV  21125 AD3                1     14
     S1TSCNV  21186 AD3                1     14
           PF3:Quit 4:Return 7:Bwd 8:Fwd 10:Left 11:Right 12:Stack
                    COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.            1.0A
```

This is the primary control screen for RAAD. It displays entries in Spool Queues, routes reports to printers, and provides other control functions.

The Queue Display for the DOC queue is formatted differently and responds to a different set of commands. This is described in more detail below.

After the Queue Display screen has been displayed, you can:

- Select a report to be printed on any RAAD Device, CICS printer, or writer.

- Select a report to be sent to a PC attached to CICS via a 3270 emulator package. This feature requires a separate component of RAAD to be installed and running on the PC.
- Delete reports (if authorized).
- Alter the class, disposition, priority, Remote ID, and/or copy count of reports (if authorized). In the RAD queue, you can also alter the retention date for reports stored in the RAAD file.
- Release a report to be printed on the system printer.
- Scroll forward and backward in the queue using PF7 and PF8.
- Request that a report be viewed on your CRT.

Information displayed on the Queue Display is a snap shot of the current queue. Information could change while the Queue Display itself id being formatted as well as soon thereafter. As a result, occasionally reports shown on the Queue Display may no longer be available for your use.

Typically, you use this display to examine the contents of various queues and to select a report to be printed on a CICS attached printer. Enter the print command (“P”) in the “CMD” field to the left of the desired report, and pressing ENTER to print.

The format of the Queue Display can vary from queue to queue as different queues have different requirements. The screen capture above shows the format for POWER queues and the SPL queue.

There will probably be more fields available on the Queue Display than will appear on your screen. The LEFT and RIGHT functions and/or PF-keys can be used to shift the body of the Queue Display to bring additional fields into view The screen capture below shows the results of pressing PF11 (Right) on the screen above. Note that the CMD, JOB NAME, NBR, and CDP columns have remained on the screen, while to the right the system displays different data.

```
RAAD040            Report Archive And Distribution System            11/20/03
CMD: _____________________  Queue Display Queue=LST                   07:47:09
Printer: ____                                                           PAGES
CMD JOB NAME  NBR  CDP   DATE     TIME   DEST NDE DEST USR CREATOR  OWNER
--- -------- ----- --- -------- -------- -------- -------- -------- --------
    DMPINF04    62 AD3 09/09/02 10:37:42 BIM               BIM      SJJ
    UD52171   1461 AD3 09/13/02 11:55:50 BIM      PG       BIM      PG
    UD52171   1471 AD3 09/13/02 12:03:57 BIM      PG       BIM      PG
    BIMCNSOL  8866 AD3 10/03/02 13:51:38 BIM               BIM
    STARTVCS 13923 AD3 10/25/02 09:07:19 BIM      KEN      BIM      KEN
    PCSLOG   15606 AD3 10/31/02 09:41:05 BIM               VSE3
    TSTESA27    61 AD3 09/09/02 10:37:41 BIM               BIM      MKJ
    FAQSAO   16420 AD3 11/04/02 08:28:01 BIM               BIM      R000
    FAQSAO   16421 AD3 11/04/02 08:50:17 BIM               BIM      DRJ
    S1TSCNV  18174 AD3 11/08/02 12:02:42 BIM      LFL      BIM      LFL
    DOSVSDMP 18663 AD3 11/12/02 07:25:22 BIM      KEN      BIM      KEN
    S1TSCNV  21120 AD3 11/19/02 12:42:32 BIM      LFL      BIM      LFL
    S1TSCNV  21122 AD3 11/19/02 12:44:17 BIM      LFL      BIM      LFL
    S1TSCNV  21123 AD3 11/19/02 12:46:21 BIM      LFL      BIM      LFL
    S1TSCNV  21124 AD3 11/19/02 12:46:31 BIM      LFL      BIM      LFL
    S1TSCNV  21125 AD3 11/19/02 12:46:41 BIM      LFL      BIM      LFL
    S1TSCNV  21186 AD3 11/19/02 13:47:50 BIM      LFL      BIM      LFL
           PF3:Quit 4:Return 7:Bwd 8:Fwd 10:Left 11:Right 12:Stack
                    COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.             1.0A
```

Queue Display fields are grouped into two categories:

- Printer and Command Fields
- Report Control Fields.

Printer and Command Fields

Field	Description
Printer	The name of any authorized RAAD Device or your own Terminal ID if you are on a PC and you are using the RAAD PC Transfer Program.
CMD	Screen commands can be: • **BWD—**Scroll the Queue Display backward. PF7 is permanently assigned to this command. • **FWD—**Scroll the Queue Display forward. PF8 is permanently assigned to this command. • **LEFT—**Shift the "variable area" of the Queue Display to the left to bring additional report fields into view. PF10 is permanently assigned to this command. • **LINES**—This is used to change the Queue Display to show lines in the "TO" and "LEFT" fields instead of pages. The header changes to "LINES." • **PAGES**—This is used to change the Queue Display to show pages in the "TO" and "LEFT" fields instead of lines. The header changes to "PAGES." • **QUIT—**Exit RAAD immediately. PF3 is permanently assigned to this command. • **REFRESH—**This refreshes the Queue Display starting with the first entry on the current screen. Use this to get more timely information about the current Queue. • **RETURN—**Return to the preceding RAAD screen. PF4 is permanently assigned to this function. • **RIGHT**—Shift the "variable area" of the Queue Display to the right to bring additional report fields into view. PF11 is permanently assigned to this function. • **STACK**—Proceed to the RAAD Program Stack. PF12 is permanently assigned to this function. • **STATUS**—Proceed to the RAAD Control Device Screen, where you can control the printing of reports.

Report Control Fields

These fields are available for each line entry on the Queue Display. Some are restricted to individual Spool Queues as described below.

CMD	Action
	The values shown here for the commands are the defaults. These may have been changed in the User Profile at your installation.
A	Alter the class, disposition, priority, System ID, Remote ID, and/or copy count of a report. If you are authorized to do this, enter an "A" here. The cursor moves to the "CDP" field. • You can enter a new class, disposition, and/or priority in the CDP field. See CDP in the Queue Display Line Item Fields table below). • If you want to change the Remote ID, move the cursor to the "REM" field and enter a value from 0 to 250. • If you want to change the copy count, move the cursor to the "CC" field and enter a value from 1 to 255. • In the RAD queue, you can also alter the Expiration Date by tabbing to the EXP.DATE field and keying in a new expiration date. Use the reserved word "PERM" to indicate permanent retention.
D	Delete a report from the Spool Queue. To do this, enter a "D" here and press ENTER. Depending on an option selected by your System Administrator, a delete request may actually alter the report to another class, disposition, and/or priority instead of deleting it.
O	View output of a currently executing job on your CRT. To do this, enter an "O" here and press ENTER. This command is valid only for jobs in the RDR queue with a disposition of "*" and displays the printed output of the first printer found. If the job is using multiple printers, overtype the CD field with the spooled device address (*cuu*). Refer to the CDP field for more information.
P	Print a selected report at the location specified in the PRINTER field. To perform this function, enter the letter "P" and press ENTER. Before pressing ENTER, you can modify the starting and/or ending page numbers, line numbers if in LINE mode or the copy count values (explained below). See the "FUNCTION" field above, for information on LINE mode.
R	Release a report to the system printer or release a RDR job for execution. To do this, enter an "R" here and press ENTER. The exact functioning of the release command depends on how it is defined in your User Profile. You may not be authorized to use this command in certain queues.
V	View the report on your CRT. To view a report, enter a "V" here and press [ENTER].
/	Scroll to a specific line. If you want to cause one of the report detail lines to be displayed as the first line, type in a "/" on the desired line and press ENTER.

Queue Display Line Item Fields

Field	Description
JOB NAME	Job name of Spool Queue entry
NBR	Job number (VM Spool ID) of Spool Queue entry
CDP	Class, Disposition, Priority
S	POWER System ID
REM	POWER Remote ID
FORM	Forms ID. If RDR queue, this is the Partition ID of a currently executing job.
FROM	Starting page, line, or card
TO	Ending page, line, or card
USER-INFO PASSWD	User Information-Password entered here if required.
CC	Copy Count. Remaining copies if currently printing.
PRTR	Name of active RAAD Device, or device address of POWER system printer. If the printer is waiting for a response from you, such as a “Forms Mount,” the printer ID is highlighted. Issue the “Status” command . above) to start the printing process.
LEFT	Number of pages left to print.
DATE	Date report was placed in Queue.
TIME	Time report was placed in Queue.
DEST.NDE	Destination node.
DEST.USR	Destination User ID.
CREATOR	VM Creator, or POWER originating node.
OWNER	VM Owner, or POWER originating User ID.
GROUP	BIM-ARCHIVE or RAAD Group Name, for RAD and ARC Queues only.
EXP.DATE	Expiration Date for RAD Queue Only (YY/MM/DD FORMAT).

RAD and SPL Queue Report Status

For the RAD and SPL Queues, the NBR column may contain a highlighted status field. If so, it will be one of the following:

Field	Description
OPEN	Report is currently open, or a failure occurred and the report was not properly closed. RAAD cannot determine the exact circumstances behind the OPEN status.
APEND	Report is closed for append.
DELET	Report has been deleted and is awaiting the Daily Purge to remove it from the file. This option appears if you have selected the "Deferred Delete" option in the $SPL Catalog Definition.

Open reports, either "OPEN" or "APEND" status, cannot be deleted directly. They can be viewed and printed, but can only be deleted by the System Administrator using the "X" command on the report line. Use caution when deleting these reports as there may be an active task attempting to write to the report and its deletion can cause unpredictable results.

Note: Do not attempt to delete the RADLOG file by using the "X" command without first contacting CSI Technical Support. Various system problems may occur if you do. For example, RAAD will no longer log events.

Queue Display for the DOC Queue

```
RAAD035            Report Archive And Distribution System            04/26/04
CMD: _____________________ Queue Display Queue=DOC                   12:26:57
Printer: ________
CMD Directory Tree
--- ------------------------------------------------------------------------
 _ <DIR>TEST DIRECTORY ONE
 _ <DIR>TEST DIRECTORY TWO.HDIR
 _    FILE 001.XTXT
 _    <DIR>TEXT FILES
 _       FILE 001.TXT
 _       FILE 003.TXT
 _ <DIR>TEST DIRECTORY THREE
 _ HELP.TOP


 CURRENT SEL: /TEST DIRECTORY TWO.HDIR/TEXT FILES
                   PF1:Help 3:Quit 4:Return 7:Bwd 8:Fwd
                  COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.            1.2A
```

Because of its hierarchical nature, the DOC queue requires its own unique Queue Display. At the top of the display, the CMD and Printer fields work the same as for the Queue Display discussed previously. The DOC queue itself is presented in a different format.

Directory entries in the DOC queue are prefixed with "<DIR>" to distinguish them from files that are not prefixed. As each level of directory is expanded, its subordinate files and directories are indented by three bytes. In the sample screen above, we see that:

- FILE001.XTXT is contained in directory /TEST DIRECTORY TWO.HDIR
- FILE001.TXT is contained in directory /TEST DIRECTORY TWO.HDIR/TEXT FILES.

The full path name for FILE001.TXT is /TEST DIRECTORY TWO.HDIR/TEXT FILES/FILE001.TXT.

From this screen, you can delete a file or files, remove a directory from the hierarchy, alter a file, add a new directory, view, and/or print one or more files. The available line commands are described in the following table:

CMD	Action
A	Alter the file name. When this command is selected, the full path name of the selected file is presented to you. To alter the file name, type over the name, making whatever changes are necessary, and press ENTER. Directory names can also be altered in this manner. Only the first instance of the alter or make directory commands are honored.
D	Delete this file. You can also use this command to remove a directory from the file. The directory must be empty, meaning it cannot contain files or subordinate directories.
M	Make directory. When this command is selected, the full path name of the selected file is presented to you. Type over the name where appropriate to create a new directory name. You can only add one level of directory with this command.
+	A plus sign causes the directory to be expanded, and the display shows the contents of the selected directory.
-	A minus sign collapses an expanded directory.
V	Transfers control to the RAAD View Display to see the contents of the file. The resulting display format is controlled by the file extension table as established in the System Configuration.
P	Prints the file on the printer supplied at the top of the screen.

The following Commands are honored by the DOC Queue Display:

CMD	Action
BWD	Scroll the Queue Display backward. PF7 is permanently assigned to this command.
FWD	Scroll the Queue Display forward. PF8 is permanently assigned to this command.
QUIT	Exit RAAD immediately. PF3 is permanently assigned to this command.
RETURN	Return to the preceding RAAD screen. PF4 is permanently assigned to this function.

CMD	Action
STACK	Proceed to the RAAD Program Stack. PF12 is permanently assigned to this function.
STATUS	Proceed to the RAAD Control Device Screen. From this screen, you can control the printing of reports.

RAAD View Display

```
RAAD041          Report archive And Distribution System: View Display   11/20/03
CMD: _____________________     LST:DMPINF04,62,P=1,L=1                   07:48:26
 ...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...8
1// LOG
 // EXEC PROC=DTRINFOA
 // ASSGN SYS016,DISK,VOL=SYSWK1,SHR       INFO ANAL MANAGEMENT FILE
 1T20I  SYS016 HAS BEEN ASSIGNED TO X'205' (TEMP)
 // ASSGN SYS017,DISK,VOL=SYSWK1,SHR       INFO ANAL ROUTINES FILE
 1T20I  SYS017 HAS BEEN ASSIGNED TO X'205' (TEMP)
 EOP DTRINFOA
 // EXEC INFOANA,SIZE=INFOANA,OS390
 BLN1008I INFO/ANALYSIS READY
-   SELECT DUMP MANAGEMENT
-     DUMP NAME SYSDUMP.F6.DF600089
 BLN9018I DUMP SYSDUMP.F6.DF600089 SELECTED
-          RETURN
-   SELECT DUMP VIEWING
-          CALL DFHPD410 DATA KE=3,DS=3,TR=3,LD=3
1
  CICS DUMP: SYSTEM=CICS01

            PF3:Quit 4:Return 7:Bwd 8:Fwd 10:Left 11:Right 12:Stack
                   COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.            1.0A
```

This screen is used to view reports on a CRT. You view reports by entering a “V” or “O” in the desired reports command (“CMD”) field on the Queue Display. The upper left hand corner of the report is displayed as shown below.

From this screen, you can:

- View various parts of the report
- Print various parts of the report on any “printer” that you are authorized to specify in the PRINTER field of the Queue Display
- Return to the Queue Display
- Delete this report and return to the Queue Display.
- Release this report to be printed on the system printer and return to the Queue Display.

You can move through the report by entering commands on Line 2 or pressing PF keys. If you preceded a command with an ampersand (&), the command will remain on the

screen after it is executed. It is useful for things like repeat locate where entering `&L string` will locate the next occurrence of `string` and remain on the screen so that you only need to press ENTER to locate the next one, etc. Prefixing the ampersand works on all the commands for this screen.

These commands are shown in the following table.

CMD	PF Key	Action
ALT		Toggles the View Display between the primary and secondary sizes. Under normal circumstances, RADD uses a model 5 screen for the View Display. However, some queue entries (JCL in the RDR queue, for instance) are better viewed in another 3270 mode
BA or BWD	PF7	The previous screen is displayed moving backwards through the report. There is no horizontal movement.
BH		The previous screen is displayed moving backwards one-half screen through the report. There is no horizontal movement.
BOT		The last line of the report is displayed on the last line of the CRT. There is no horizontal movement.
C n		The screen is moved directly to column *n* (where *n* is a value from 1 to 255). There is no vertical movement. RAAD is capable of displaying up to 256 columns per line.
D n		The screen is moved forward through the report *n* lines (where *n* is a 1 thru 5 digit number). There is no horizontal movement.

CMD	PF Key	Action

DEBUG		Toggles the Display between normal and "debug" mode. In "debug" mode two additional columns appear on the screen: line length and carriage control The "debug" display looks like:
		`RAAD041 Report archive And Distribution System: View Display`
		`11/20/03`
		`CMD: _____ LST:DMPINF04,62,P=0,L=1`
		`07:50:49`
		`...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...8`
		`007 09 1// LOG`
		`022 09 // EXEC PROC=DTRINFOA`
		`068 09 // ASSGN SYS016,DISK,VOL=SYSWK1,SHR INFO ANAL MANAGEMENT FILE`
		`049 09 1T20I SYS016 HAS BEEN ASSIGNED TO X'205' (TEMP)`
		`066 09 // ASSGN SYS017,DISK,VOL=SYSWK1,SHR INFO ANAL ROUTINES FILE`
		`049 09 1T20I SYS017 HAS BEEN ASSIGNED TO X'205' (TEMP)`
		`013 09 EOP DTRINFOA`
		`035 09 // EXEC INFOANA,SIZE=INFOANA,OS390`
		`029 09 BLN1008I INFO/ANALYSIS READY`
		`026 09 - SELECT DUMP MANAGEMENT`
		`035 09 - DUMP NAME SYSDUMP.F6.DF600089`
		`043 09 BLN9018I DUMP SYSDUMP.F6.DF600089 SELECTED`
		`017 09 - RETURN`
		`023 09 - SELECT DUMP VIEWING`
		`049 09 - CALL DFHPD410 DATA KE=3,DS=3,TR=3,LD=3`
		`001 09 1`
		`133 09 CICS DUMP: SYSTEM=CICS01`
		`001 09`
		`056 09 -- DFHPD0121I FORMATTING CONTROL BLOCKS FOR JOB CICS01`
		`PF3:Quit 4:Return 7:Bwd 8:Fwd 10:Left 11:Right 12:Stack`
		`COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC. 1.0A`

DEL		The current View ends and the report is deleted. If multiple views are "chained," the next view is automatically started. This command is not valid if you are viewing the output of a currently executing job using the Queue Display "O" command, or for the RAD, SPL, or ARC Queues.
END		This command "QUITs" all view windows (split mode) and leave RAAD completely. This returns you to either a blank CICS screen or another user application depending on how you entered the Queue Display originally. Multiple views "chained" from the Queue Display is bypassed by this command.
F string		Starting from the current line in the report, the character string entered 1 space after the "F" is searched. Each line is searched only once in column 1. After a search string has been entered, entering 'F' alone can be used to find the next occurrence of the same string. For example, "F TOTALS" finds the first occurrence of the character string "TOTALS." The search starts from the current line and each line is checked only once for a match in column 1.
FH		The next screen is displayed moving forward one-half screen through the report. There is no horizontal movement.
FO or FWD	PF8	The next screen is displayed moving forward through the report. There is no horizontal movement.

CMD	PF Key	Action

HEX		Toggles the screen between normal display and "hex" display mode. In "hex" mode, each line is shown in both character and hexadecimal as is shown in the screen shot below:
		`RAAD041 Report archive And Distribution System: View Display`
		`11/20/03`
		`CMD: _____ LST:DMPINF04,62,P=0,L=1`
		`07:49:44`
		`...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...8`
		`1// LOG`
		`F664DDC`
		`1110367`
		`// EXEC PROC=DTRINFOA`
		`4664CECC4DDDC7CEDCDCDC`
		`0110575307963E43995661`
		`// ASSGN SYS016,DISK,VOL=SYSWK1,SHR INFO ANAL MANAGEMENT FILE`
		`4664CEECD4EEEFFF6CCED6EDD7EEEEDF6ECD4444444CDCD4CDCD4DCDCCCDCDE4CCDC`
		`0110122750282016B4922B563E282621B2890000000956601513041517545530693 5`
		`1T20I SYS016 HAS BEEN ASSIGNED TO X'205' (TEMP)`
		`4FEFFC44EEEFFF4CCE4CCCD4CEECCDCC4ED4E7FFF744ECDD5`
		`0132090028201608120255501229755403607D205D0D3547D`
		`// ASSGN SYS017,DISK,VOL=SYSWK1,SHR INFO ANAL ROUTINES FILE`
		`4664CEECD4EEEFFF6CCED6EDD7EEEEDF6ECD4444444CDCD4CDCD4DDEECDCE4CCDC`
		`0110122750282017B4922B563E282621B2890000000956601513096439552069 5`
		`PF3:Quit 4:Return 7:Bwd 8:Fwd 10:Left 11:Right 12:Stack`
		`COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC. 1.0A`

L string		Starting from the current line in the report, the system searches for the character string entered 1 space after the "L." Each line is scanned from column 1 to the end of the line for the string. After a search string has been entered, 'L' by itself can be used to locate the next occurrence of the same string. For example, "L PROCEED" finds the first occurrence of the character string "PROCEED." The search starts from the current line and all columns are scanned for a match starting with column 1.
LEFT		Positions the display horizontally, one screen width to the left of the currently displayed column. No vertical movement occurs.
LM		Displays the left margin of the report, columns 1-80, on column 1 of the CRT. There is no vertical movement.
P n		If *n* is specified, the screen is moved directly to line *n*, where *n* is a 1 to 5-digit number. If *n* is omitted, the screen is positioned such that the character pointed to by the position of the cursor is placed at the upper left hand corner of the screen, or at the upper left hand corner of the window, if split screen is being used.
PAGE n		The screen is moved directly to page *n*, where *n* is a 1 to 5 digit number. This is the printed report page, not the screen page. If this command is used for a non-list type report, this command is treated the same as the "FO" command.

CMD	PF Key	Action
PAGEDN n		If *n* is specified, the current line number is advanced by *n* report pages, where *n* is a 1 to 5-digit number. If this command is used for a non-list type report, this command is treated the same as the "FO" command. If *n* is omitted, the screen is positioned such that the top of the next report page is placed at the top of the screen.
PAGEUP n		If *n* is specified, the current line number is reduced by *n* report pages, where *n* is a 1 to 5-digit number. If this command is used for a non-list type report, this command is treated the same as the "BA" command. If *n* is omitted, the screen is positioned such that the top of the previous report page is placed at the top of the screen.
Q		The active window is closed. If not in Split-Screen mode, control is returned to the Queue Display.
QALL		The View session is ended and control is returned to the Queue Display.
QUIT	PF3	This command "QUITs" all view windows (split mode) and leave RAAD completely. This returns you to either a blank CICS screen or another user application depending on how you entered the Queue Display originally. Multiple views "chained" from the Queue Display are bypassed by this command.
R		The current line number (L=) is "remembered" and if a prior line number was remembered by a prior "R" command, the view is repositioned on that line number. This command can be used to toggle between any two locations in the report being viewed.
REL		The current View ends and a Release command ("R") is generated by the Queue Display on the report being viewed. If multiple views are "chained," the next view automatically starts. This command is not valid if you are viewing the output of a currently executing job using the Queue Display "O" command.
RETURN	PF4	Return to the RAAD Queue Display.
RIGHT		Positions the display horizontally one screen width to the right of the currently displayed column. No vertical movement occurs.
RM		The right margin, columns 51-132, is displayed starting in column 1 of the CRT. There is no vertical movement. RAAD is capable of displaying up to 256 columns per line. The Column command "C" must be used to view columns 133-256.
S string		Same as LOCATE (L), only searching starts at the top of the report, not the current line.

CMD	PF Key	Action
SET PFnn cmd		This command is used to alter the value of your PF keys for the duration of the current report viewing session. Each time you return to the Queue Display, your PF keys are reset to the default values defined by your installation. The value *nn* is any 1 or 2-digit number from 1 to 24. *cmd* is a valid View Display command. This command is not checked for validity until the PF key is used. For example, "SET PF5 L" sets up PF5 to locate the character string "L."
SPLIT n SPLITC n		These commands activate a second viewing "window" (split screen) in the report currently being viewed. After a second window has been established, these commands can then be used to change the current window boundaries. • SPLIT—splits the screen horizontally where *n* is the row number where the split is to take place. Each window must have at least 5 rows. • SPLITC—splits the screen vertically where *n* is the column number where the split is to take place. Each window must have at least 15 columns. For example, "SPLIT 12" splits the screen into two windows. The current window splits at line 12.
STACK	PF12	Displays the RAAD Program Stack.
SYNC		"On/Off" command that allows you to synchronize the movement of both windows. When synchronized, any command or PF key entered applies to both windows.
TOGGLE		Allows you to change between the two viewing windows for purposes of entering scrolling commands. Only one window can be controlled at a time unless in "SYNC" mode. The right hand side of the Line 2 indicates which window is active. It indicates "LEFT" or "RIGHT" for vertical split screens, "TOP" or "BOTTOM" for horizontal split screens, or "SYNC" when both screens are synchronized.
TOP		The first line of the report is displayed on the top line of the CRT. There is no horizontal movement.
U n		The screen is moved backwards through the report n lines, where *n* is a 1 thru 5 digit number. There is no horizontal movement.

Default User Processing

To utilize the Default User capability of RAAD, create a User Profile with a User name of "$$$$$$$$" (eight $s). You must establish the User Profile to match the normal (or default) requirements of your installation.

Along with the Default User, RAAD retrieves the User ID associated with the current terminal session. The User ID RAAD obtains is the IUI Userid or, on older CICS systems, the User ID associated with the CSSN transaction. RAAD obtains the User ID using the EXEC CICS INQUIRE USERID() command.

There are two ways to implement the Default User Processing:

- On the RAAD sign on screen, simply press ENTER without providing either user ID or password, or
- In RAAD System Configuration, a new option has been provided: "Require Signon". The Default is "Yes." If "No" is specified, then RAAD bypasses sign on and proceeds according to the steps outlined below:

RAAD processes the Default User with the following steps:

RAAD locates the User ID associated with this terminal session. If a User ID is found, RAAD attempts to read a User Profile Record for that User ID. If found, it uses that Profile for execution, or
RAAD attempts to obtain a User Profile with the name "$$$$$$$$." If found, RAAD continues, otherwise When no matching Profile can be found, RAAD requires the user to sign on.

CSIRAAD-RAAD Batch Utility Program

RAAD supplies a batch utility program that is used to perform certain functions best done in a VSE B\batch environment. Use the following JCL as a guide:

```
// JOB RAADCVT
// DLBL RAADFIL,      RAAD Data File
// DLBL RAADCFL,      RAAD Catalog File
// DLBL RAADDFL,      RAAD Data File
// DLBL RAADTFL,      RAAD Temporary File
// EXEC CSIRAAD,SIZE=(AUTO)
   RAAD batch commands here
/*
/&
```

Syntax

The syntax of RAAD Commands is the same as the one used by the IBM utility IDCAMS:

- A Command followed by keyword Operands, with the value to be assigned to a keyword specified in parentheses.
- Blanks or commas are used to separate Operands from the Command and from other Operands.
- Continuation is specified by coding a dash as the last non-blank on the line to be continued.
- Comments can appear before, between, and/or after Operands.
- A comment starts with the characters "/*", is ended by the characters "*/", and can be continued to multiple lines as needed.

In the following instructions, interpret the RAAD Commands and Operands as follows:

- UPPER CASE=the exact characters to be entered
- lower case=values to be supplied by you
- boldface/underlined keywords or values=default values
- Vertical bar "|" separates mutually exclusive Operands
- Values enclosed in brackets, [], are optional

Commands

The following commands are available for CSIRAAD:

DISABLE—Disable RAAD in the online system

ENABLE—Enable RAAD in the online system

INITIALIZE—Initialize a RAAD VSAM Data Extent

RECOVER—Recover the RAAD dataset following a System Failure

SYSTEM—Maintain RAAD System Information

These commands are described in detail below.

DISABLE Command

DISABLE [XPCC(CSIRAAD)]

The DISABLE Command is used to temporarily suspend the operation of the online component of RAAD. Suspension of the online component has the following effects:

- The RAAD dataset is closed in the online partition.
- The POWER External Device Writer will not process any reports while the RAAD system is disabled.
- Cross partition services will not accept any requests.

XPCC (CSIRAAD)

Provides the ID of the RAAD Cross-Partition Interface. The default is "CSIRAAD." This can be changed using the System Configuration Display (see page 97).

ENABLE Command

ENABLE [XPCC(CSIRAAD)]

The ENABLE Command restarts the online component of RAAD. This Command normally follows a preceding DISABLE Command. ENABLE causes the following to occur:

- The RAAD dataset is reopened in the online partition.
- The POWER External Device Writer is restarted.
- Cross partition services are enabled again for use by other programs.

XPCC (CSIRAAD)

Provides the ID of the RAAD Cross Partition Interface. The default is "CSIRAAD." This can be changed using the System Configuration Display (see page 97).

The ENABLE Command cannot be used by itself to cause the online component of RAAD to activate. The online component of RAAD must be active for this Command to take effect.

INITIALIZE Command

INITIALIZE filename

The INITIALIZE Command is used to prepare a VSAM Data Extent for use as a RAAD Data File.

filename—This Operand is required. It provides the DLBL name of the VSAM file to be initialized. RAAD automatically adds a group to the Data File with this name. This group is required during the catalog recovery process.

RECOVER Command

RECOVER

```
     [ ALL | filename   - ]
     [ DELETE | NODELETE -]
     [ RETAIN | NORETAIN  ]
```

The RECOVER Command is used to ensure that the RAAD Dataset is intact following a System Failure. The recovery process ensures that:

- Every report reference is complete. If a report entry exists within a Group, the report is found on the Archive Data File.
- Stray data and/or index records found on the RAAD Data File are deleted.
- Stray reports, those not referenced within any group, are optionally deleted or re-cataloged.

DELETE | NODELETE

The DELETE|NODELETE operand controls the processing for both stray records on the data component of the RAAD dataset, as well as group report references for which the associated report can no longer be found. Specify NODELETE if you do not want these records deleted.

RETAIN | NORETAIN

This RETAIN|NORETAIN operand controls the processing for intact reports that are no longer referenced by a Report Identification record, meaning they no longer appear in the RAD queue when the View Reports selection is chosen. Specify RETAIN to have the Report Identification records rebuilt. If NORETAIN is specified, processing depends on the DELETE Operand above. If DELETE is specified, then the report is deleted; if NODELETE is specified, there is no change to the Archive Dataset.

If RETAIN is specified, and the associated Report Identification record cannot be found, a new Report Identification record is created using the default sort sequence. If a catalog entry cannot be found, the report is placed in a group with a name that is the same as the Archive Data File and referencing catalog id “0000.” For example, for the file BIMARCD, the group name will be “BIMARCD” You can access the recovered reports through the online facilities documented elsewhere in this manual.

SYSTEM Command

```
SYSTEM
     PASSWORD (pppppppp [/nnnnnnnn] )  -
     [ CATALOGFILE (cat.file.name)       -]
     [ DATAFILE (data.file.name)         -]
     [ TEMPORARYFILE (temp.file.name)    -]
     [ INITIALIZE | NOINITIALIZE          ]
```

The SYSTEM command is used to maintain system information on the RAAD Dataset. It is generally used only when installing the system.

Note : Be very careful when using the "INITIALIZE" operand. See INITIALIZE, below.

PASSWORD(pppppppp /nnnnnnnn)

The PASSWORD operand is required. The value '*pppppppp*' is the Master Password for the RAAD System. As initially shipped, this password is set to "$SYS."

The second entry, *nnnnnnnn*, is optional, and used to change the Master Password. CSI recommends that you change this value during the installation process. You can change the password here, or you can do it online either on the RAAD Sign On Screen or the User Profile definition for user "$SYS."

The password can be one to eight characters long and can consist of the characters A-Z, 0-9, space, comma, ., |, <, >, ;, :, +, =, !, @, #, $, %, &, *, (,), ', ", /, ?, -, }, or { in any combination. The first character of the password must not be a space. The password is encrypted on the file and cannot be readily decoded by examination of a hexadecimal dump of the record.

If you inadvertently lose or forget your Master Password, contact CSI Technical Support for assistance.

CATALOGFILE (*RAADCFL* | cat.file.name)

Specify the CICS File Name of the RAAD Catalog file. The default is RAADCFL.

DATAFILE (*RAADDFL* | data.file.name)

Specify the CICS File Name of the RAAD Data file. The default is RAADDFL.

TEMPORARYFILE (*RAADTFL* | temp.file.name)

Specify the CICS File Name of the RAAD Temporary file. The default is RAADTFL.

INITIALIZE | *NOINITIALIZE*

The INITIALIZE|NONINITIALIZE operand is only needed once. It is used to perform initial formatting of the RAAD files.

Note: After you have used this operand, do not use it again.

If this operand is selected, RAAD initializes all four of its basic files: RAAD File, Catalog File, Data File, and Temporary File. RAAD also adds several basic records that complete the initial RAAD system.

The default is NOINITIALIZE.

RAAD Daily Processes

RAAD provides two daily processes, both of which run in CICS as background tasks:

- Daily Reports—Summarize the RAAD activity
- Daily Purge—Deletes expired reports from the RAAD dataset.

The RAAD daily processes can be run automatically by choosing the appropriate settings in the System Configuration Display. Both processes generate a control report that is placed into the RAAD dataset, in group "$DAILY."

Daily Reports

The Daily Report process closes the current log file, opens a new one for ensuing messages, and reads and summarizes the just closed log file. When processing is complete, the processed log file is moved into the "$DAILY" group for subsequent reference.

The Daily Report organizes RAAD Log messages into the following categories:

- ABENDS—Program Abends.
- ERRORS—Errors detected.
- MAINTENANCE REQUESTS—Additions, changes, and deletions to RAAD configuration data.
- SYSTEM CONTROL REQUESTS—System control messages such as start and stop.
- DELETED REPORTS—Reports deleted from one of the supported RAAD queues.
- ALTERED REPORTS—Reports altered in one of the supported RAAD queues.
- PRINTED REPORTS—Reports printed by RAAD.
- QCOPY REPORTS—QCOPY jobstreams submitted by RAAD.
- VIEWED REPORTS—Reports viewed.
- EXTERNAL DEVICE MESSAGES—Reports processed by the External Device Writer
- SPL REPORTS—SPL reports generated.
- SIGNONS—Signs on to RAAD.

Depending on the severity, some messages appear in both their specific category and the "ERRORS" category.

Sample RAAD Daily Report

```
REPORT ARCHIVE AND DISTRIBUTION SYSTEM      DAILY REPORTS           PAGE     1
          11/18/03 07:15:22 -THRU- 11/19/03 06:05:44
       2 ABENDS DETECTED
          11/18/03 08:13:21 DAVE2            ABEND ASRA OCCURRED IN PROGRAM CSIRAA33
          11/18/03 12:52:19 DAVE2            ABEND ASRA OCCURRED IN PROGRAM CSIRAA26
       3 ERRORS DETECTED
          11/18/03 08:27:18 CSIRAA33-104 Report 'RAAD002 ' Missing For Output 'RAAD001 '
          11/18/03 08:27:18            ERROR QCOPY REPORT(RAAD001 ) JNM=RAAD001
          11/18/03 14:08:55            ERROR QCOPY REPORT(RAAD001 ) JNM=RAAD001
      14 MAINTENANCE REQUESTS DETECTED
          11/18/03 07:20:50 DAVE2            INPUT    RECORD ADDED    KEY=BIMSTAR
          11/18/03 07:21:17 DAVE2            INPUT    RECORD ADDED    KEY=BIMFSTR
          11/18/03 07:21:48 DAVE2            INPUT    RECORD UPDATED  KEY=BIMFSTR
          11/18/03 08:37:49 DAVE2            OUTPUT   RECORD UPDATED  KEY=RAAD001
          11/18/03 08:51:33 DAVE2            SELECT   RECORD ADDED    KEY=RAAD001 SSEGID
          11/18/03 08:52:43 DAVE2            SELECT   RECORD ADDED    KEY=RAAD001 XEXCLCO
          11/18/03 08:56:40 DAVE2            SELECT   RECORD UPDATED  KEY=RAAD001 XEXCLCO
          11/18/03 09:03:39 DAVE2            SELECT   RECORD UPDATED  KEY=RAAD001 XEXCLCO
          11/18/03 09:05:11 DAVE2            SELECT   RECORD UPDATED  KEY=RAAD001 XEXCLCO
          11/18/03 09:16:04 DAVE2            SELECT   RECORD UPDATED  KEY=RAAD001 XEXCLCO
          11/18/03 09:18:14 DAVE2            SELECT   RECORD UPDATED  KEY=RAAD001 XSEGID
          11/18/03 09:18:18 DAVE2            SELECT   RECORD ADDED    KEY=RAAD001 XSEGID
          11/18/03 11:40:04 DAVE2            OUTPUT   RECORD UPDATED  KEY=RAAD001
          11/18/03 11:40:18 DAVE2            OUTPUT   RECORD UPDATED  KEY=RAAD001
      16 SYSTEM CONTROL REQUESTS DETECTED
          11/18/03 07:25:03 CSIRAA99-000 EXTERNAL DEVICE WRITER STOPED
          11/18/03 07:25:03 CSIRAA99-000 POWER POLLING STOPED
          11/18/03 07:25:03 CSIRAA99-000 CROSS PARTITION ACCESS STOPED
          11/18/03 07:25:03 CSIRAA99-000 DAILY REPORTS STOPED
          11/18/03 07:25:08 CSIRAA99-000 EXTERNAL DEVICE WRITER STARTED
          11/18/03 07:25:08 CSIRAA99-000 POWER POLLING STARTED
          11/18/03 07:25:08 CSIRAA99-000 CROSS PARTITION ACCESS STARTED
          11/18/03 07:25:08 CSIRAA99-000 DAILY REPORTS STARTED
          11/18/03 08:12:06 CSIRAA99-000 EXTERNAL DEVICE WRITER STOPED
          11/18/03 08:12:06 CSIRAA99-000 POWER POLLING STOPED
          11/18/03 08:12:06 CSIRAA99-000 CROSS PARTITION ACCESS STOPED
          11/18/03 08:12:06 CSIRAA99-000 DAILY REPORTS STOPED
          11/19/03 06:05:44 CSIRAA99-000 EXTERNAL DEVICE WRITER STARTED
          11/19/03 06:05:44 CSIRAA99-000 POWER POLLING STARTED
          11/19/03 06:05:44 CSIRAA99-000 CROSS PARTITION ACCESS STARTED
          11/19/03 06:05:44 CSIRAA99-000 DAILY REPORTS STARTED
       1 DELETED REPORTS DETECTED
          11/18/03 14:13:55 DAVE2            REPORT DELETED   QUE=RAD,JOB=CSIRAA71,20209
      NO ALTERED REPORTS DETECTED
       9 PRINTED REPORTS DETECTED
          11/18/03 07:39:11             WRAD REPORT PRINTED   QUE=LST,JOB=CSIRAA33,20194
          11/18/03 07:39:14             WRAD REPORT PRINTED   QUE=LST,JOB=CSIRAA16,20190
          11/18/03 07:58:19             WRAD REPORT PRINTED   QUE=LST,JOB=CSIRAA33,20202
                           COPYRIGHT 2002, CONNECTIVITY SYSTEMS INC.
```

```
REPORT ARCHIVE AND DISTRIBUTION SYSTEM      DAILY REPORTS           PAGE     2
          11/18/03 07:15:22 -THRU- 11/19/03 06:05:44
          11/18/03 07:58:23             WRAD REPORT PRINTED   QUE=LST,JOB=CSIRAA71,20209
          11/18/03 07:58:25             WRAD REPORT PRINTED   QUE=LST,JOB=CSIRAA92,20214
          11/18/03 07:58:28             WRAD REPORT PRINTED   QUE=LST,JOB=CSIRAA16,20206
          11/18/03 08:09:33             WRAD REPORT PRINTED   QUE=LST,JOB=CSIRAA71,20221
          11/18/03 08:09:35             WRAD REPORT PRINTED   QUE=LST,JOB=CSIRAA33,20218
          11/18/03 08:09:39             WRAD REPORT PRINTED   QUE=LST,JOB=CSIRAA92,20226
       2 QCOPY REPORTS DETECTED
          11/18/03 08:27:18            ERROR QCOPY REPORT(RAAD001 ) JNM=RAAD001
          11/18/03 14:08:55            ERROR QCOPY REPORT(RAAD001 ) JNM=RAAD001
       9 VIEWED REPORTS DETECTED
          11/18/03 07:27:09 DAVE2            REPORT VIEWED    QUE=RAD,JOB=RADAILY ,00358
          11/18/03 07:35:01 DAVE2            REPORT VIEWED    QUE=RAD,JOB=RADAILY ,00358
          11/18/03 07:58:09 DAVE2            REPORT VIEWED    QUE=RAD,JOB=RADAILY ,00358
          11/18/03 07:59:04 DAVE2            REPORT VIEWED    QUE=RAD,JOB=RADPURGE,00347
          11/18/03 08:13:41 DAVE2            REPORT VIEWED    QUE=RAD,JOB=RAADLOG ,00349
          11/18/03 08:27:33 DAVE2            REPORT VIEWED    QUE=RAD,JOB=RAADLOG ,00349
          11/18/03 08:38:25 DAVE2            REPORT VIEWED    QUE=RAD,JOB=RAAD001 ,18286
          11/18/03 08:43:38 DAVE2            REPORT VIEWED    QUE=RAD,JOB=RAADLOG ,00349
          11/18/03 14:14:17 DAVE2            REPORT VIEWED    QUE=RAD,JOB=RAADLOG ,00349
      27 EXTERNAL DEVICE MESSAGES DETECTED
          11/18/03 07:25:08 CSIRAA30-069 READY FOR POWER CONNECT
          11/18/03 07:25:23 CSIRAA30-070 SUCCESSFULLY ACTIVATED CLASS=R
          11/18/03 07:25:23 CSIRAA30-078 JOB RADGTST /20166 RECEIVED FROM POWER
          11/18/03 07:25:26 CSIRAA31-079 JOB RADGTST  STORED IN RAAD
          11/18/03 07:25:27 CSIRAA30-078 JOB BIMINQ  /20174 RECEIVED FROM POWER
          11/18/03 07:25:29 CSIRAA31-079 JOB BIMINQ   STORED IN RAAD
          11/18/03 07:25:30 CSIRAA30-078 JOB BIMLOG  /20175 RECEIVED FROM POWER
          11/18/03 07:25:32 CSIRAA31-079 JOB BIMLOG   STORED IN RAAD
          11/18/03 07:25:53 CSIRAA30-078 JOB BIMXFR1 /20182 RECEIVED FROM POWER
          11/18/03 07:25:56 CSIRAA31-079 JOB BIMXFR1  STORED IN RAAD
          11/18/03 07:25:57 CSIRAA30-078 JOB BIMXFTP /20183 RECEIVED FROM POWER
          11/18/03 07:25:59 CSIRAA31-079 JOB BIMXFTP  STORED IN RAAD
          11/18/03 07:26:00 CSIRAA30-078 JOB BIMFTDWN/20186 RECEIVED FROM POWER
          11/18/03 07:26:02 CSIRAA31-079 JOB BIMFTDWN STORED IN RAAD
          11/18/03 07:26:03 CSIRAA30-078 JOB BIMFTOPT/20187 RECEIVED FROM POWER
          11/18/03 07:26:05 CSIRAA31-079 JOB BIMFTOPT STORED IN RAAD
          11/18/03 07:39:11 CSIRAA31-079 JOB CSIRAA33 STORED IN RAAD
          11/18/03 07:39:14 CSIRAA31-079 JOB CSIRAA16 STORED IN RAAD
          11/18/03 07:58:19 CSIRAA31-079 JOB CSIRAA33 STORED IN RAAD
          11/18/03 07:58:23 CSIRAA31-079 JOB CSIRAA71 STORED IN RAAD
          11/18/03 07:58:25 CSIRAA31-079 JOB CSIRAA92 STORED IN RAAD
          11/18/03 07:58:28 CSIRAA31-079 JOB CSIRAA16 STORED IN RAAD
          11/18/03 08:09:33 CSIRAA31-079 JOB CSIRAA71 STORED IN RAAD
          11/18/03 08:09:35 CSIRAA31-079 JOB CSIRAA33 STORED IN RAAD
          11/18/03 08:09:39 CSIRAA31-079 JOB CSIRAA92 STORED IN RAAD
          11/18/03 08:12:07 CSIRAA30-073 PROCESSING TERMINATED DUE TO OPERATOR REQUEST
          11/19/03 06:05:44 CSIRAA30-069 READY FOR POWER CONNECT
      NO SPL REPORTS DETECTED
      NO SIGNONS DETECTED
```

Daily Purge

The Daily Purge process scans the entire RAAD dataset looking for expired reports. Reports are considered expired when:

- The expiration date for the report is greater than or equal to today's date.
- If retention is by generation, then the number of records referenced by the relevant RAAD Catalog must exceed the generation limit.

- If retention is by generation and Job Name, then the number of records referenced by the relevant RAAD Catalog with the same Job Name must exceed the generation limit.

All of the above criteria must be satisfied before RAAD will delete a report.

Depending on the size of your RAAD dataset, the Daily Purge process can take several minutes to even an hour or more to complete. During the purge process, access to RAAD is limited to Viewing reports only and it is further restricted in that you cannot access the RAD queue during this time.

Consequently, schedule the Daily Purge to occur at a time when there is little or no activity in RAAD.

A control report is generated by the Daily Purge process. A sample is shown below:

```
REPORT ARCHIVE AND DISTRIBUTION SYSTEM      DAILY PURGE             PAGE      1
                                                                      12/30/03
PROCESSING GROUP $DAILY
                 $DAILY           RAADLOG  00000382 DELETED
                 $DAILY           RAADLOG  00000379 DELETED
                 $DAILY           RAADLOG  00000369 DELETED
                 $DAILY           RADAILY  00000334 DELETED
                 $DAILY           RADAILY  00000366 DELETED
                 $DAILY           RADAILY  00000378 DELETED
PROCESSING GROUP $DAILY        28 RECORDS ENCOUNTERED       6 RECORDS DELETED
PROCESSING GROUP $LOG
                 $LOG             RAADSTAT 00000426 DELETED
PROCESSING GROUP $LOG           2 RECORDS ENCOUNTERED       1 RECORDS DELETED
PROCESSING GROUP RAADASM       24 RECORDS ENCOUNTERED       0 RECORDS DELETED
PROCESSING GROUP RAADGEN        5 RECORDS ENCOUNTERED       0 RECORDS DELETED
PROCESSING GROUP RAADTST        1 RECORDS ENCOUNTERED       0 RECORDS DELETED
**** TOTAL ****                60 RECORDS ENCOUNTERED       7 RECORDS DELETED
                          COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

Holiday Table

The holiday table is required to use the HOLIDAY option of the Daily Processes (see page 130) or QCOPY Submission (see page 200). The purpose of the holiday table is to define which days are considered holidays for your installation. A special macro (BIMHDAY) has been supplied with RAAD. This macro is used to generate the holiday table.

You can generate your holiday with only the holidays for the current year, or you can specify holidays for the current and future years.

The BIMHDAY macro has five formats:

1. TYPE=INITIAL

```
1.......10....16......                                    ..72
         BIMHDAY TYPE=INITIAL,                              X
               EXPIRES=yyyymmdd,                            X
               WARNDTE=yyyymmdd
```

This format is required, and must be the first macro entry in your Holiday table.

Operand	Description
EXPIRES=yyyymmdd	This operand provides an optional expiration date for your holiday table. If specified, it must be in *yyyymmdd* format. If omitted, your holiday table will never expire. RAAD does not use a holiday table that has expired.
WARNDATE=yyyymmdd	This operand provides an optional warning date for a holiday table that is about to expire. This Operand can only be specified if EXPIRES is also specified. The WARNDTE must not be greater than the date for EXPIRES. RAAD displays a warning message when this date is reached. If this Operand is omitted, no warning messages are displayed.

Note: Be sure to update EXPIRES and WARNDTE when you update your holiday table for future years.

2. TYPE=FINAL

```
1.......10....16......                                    ..72
         BIMHDAY TYPE=FINAL
```

Note: This format is required, and must be the last macro entry in your Holiday table.

3. SPECIAL=

```
1.......10....16......                                ..72
         BIMHDAY SPECIAL=(month,day,qual),              X
               ID='description',                        X
               YEAR=nnnn
```

This format is optional. It is used to specify "special" holiday(s) that occur on specific days of the week, specific days of the month, and specific days of a specific week within a month. It can occur as many times as needed, one "special" holiday per macro entry.

Operand	Description
ID='description'	This operand is used to supply a description for the holiday being defined. Up to 16 characters can be specified. RAAD displays this description whenever this holiday is used. If omitted, a default description is generated: "HOLIDAY nn" where '*nn*' is the relative holiday definition within your holiday table.
YEAR=nnnn	This operand is used to limit the holiday to a specific year. If this operand is omitted, the holiday is assumed to be valid for all years.

Operand	Description
SPECIAL=(month,day,qual)	This operand provides the rules that RAAD uses to determine the actual date of the holiday for the current or specified year. • **month—**specifies which month in which the holiday occurs. Valid months are JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, and DEC. • **day**—specifies the day of week or day of month in which the holiday occurs. Valid days of a week are MON, TUE, WED, THU, FRI, SAT, and SUN. Specify a number from 01-31 for a day of the month. • **qual**—is required if a day of week is specified, and is optional if a day of month is specified. If you have specified a day of week, this operand specifies which week in the month: 1ST, 2ND, 3RD, 4TH, LAST. If you have specified a day of month, this operand specifies an optional qualification: — WEEKDAY—It is only a holiday if it occurs on a weekday (MON-FRI). — FRI—If the holiday occurs on a Saturday or a Sunday, the previous Friday is also a holiday. — MON—If the holiday occurs on a Saturday or a Sunday, the following Monday is also a holiday. — FRI-MON—If the holiday occurs on a Saturday, the previous Friday is also a holiday. If it occurs on a Sunday, the following Monday is also a holiday.

4. HOLIDAY=

```
1.......10....16......                                  ..72
         BIMHDAY HOLIDAY=(list),                          X
                 YEAR=nnnn
```

This format is optional. It can occur as many times as needed. It is used to specify a list of ‘standard’ holidays that you have at your installation.

Operand	Description
YEAR=nn	This operand is used to limit the standard holidays to a specific year. If this operand is omitted, the holidays are assumed to be valid for all years.
HOLIDAY=(list)	This operand provides the list of “standard” holidays. The following table contains the “standard” holidays that can be specified and the rules assumed for each:

List Name	Rules for Calculation	Description Used for ID=
NEWYEARS	SPECIAL=(JAN,01,FRI-MON)	'NEW YEARS DAY'
MLKING	SPECIAL=(JAN,MON,3RD)	'M.L. KINGS BDAY'
PRESIDENT	SPECIAL=(FEB,MON,3RD)	'PRESIDENTS DAY'
MEMORIAL	SPECIAL=(MAY,MON,LAST)	'MEMORIAL DAY'
JULY4	SPECIAL=(JUL,04,FRI-MON)	'JULY 4TH'
LABOR	SPECIAL=(SEP,MON,1ST)	'LABOR DAY'
VETERAN	SPECIAL=(NOV,11,FRI-MON)	'VETERANS DAY'
THANKS	SPECIAL=(NOV,THU,4TH)	'THANKSGIVING'
XMAS	SPECIAL=(DEC,25,FRI-MON)	'CHRISTMAS'
EASTER	internal exit	'EASTER SUNDAY'
GOODFRI	internal exit	'GOOD FRIDAY'
DAVEDAY	SPECIAL=(DEC,02,MON)	'DEVELOPERS DAY'

5. DATE=

```
1.......10....16......                                  ..72
         BIMHDAY DATE=yyyymmdd,                           X
               ID='description'
```

This format is optional. It is used to specify holiday(s) that occur on a specific date, usually in only one year. It can occur as many times as needed, one holiday per macro entry.

Operand	Description
ID="description"	This operand is used to supply a description for the holiday being defined. Up to 16 characters can be specified. If omitted, a default description is generated: 'HOLIDAY nn' where *nn* is a number.
DATE=yyyymmdd	This operand provides the actual date of the holiday.

Holiday Table Example

You must follow Assembler language rules when you prepare the BIMHDAY customization macros. Critical points are:

- "BIMHDAY" must start in column 10.
- All other operands on continuation lines must start in column 16.
- Trailing commas and continuation marks (column 72) must be present on every card except the last card of a macro.
- Comments are permitted between the trailing commas and continuation marks, as long as there is at least one space between the comma and the comment.

```
1.......10....16......                              ..72
         BIMHDAY TYPE=INITIAL,                        X  (1
               EXPIRES=20110101,                      X  (2
               WARNDTE=20101101                          (3
         BIMHDAY HOLIDAY=(NEWYEARS,MEMORIAL,          X  (4
               JULY4,LABOR,THANKS,XMAS)                  (5
         BIMHDAY DATE=20101224,                       X  (6
               ID='CHRISTMAS EVE'                        (7
         BIMHDAY HOLIDAY=(VETERAN),                   X  (8
               YEAR=2010                                 (9
         BIMHDAY SPECIAL=(DEC,31,WEEKDAY),            X  (10
               ID='NEW YEARS EVE'                        (11
         BIMHDAY TYPE=FINAL                             (12
```

Notes on Holiday Table Example

- Lines 1 through 3: The TYPE=INITIAL format must be the 1st entry in your holiday table.
- Line 2: This Operand is optional. It indicates that this holiday table expires on January 1, 2011.
- Line 3: This Operand is used in conjunction with Line 2. It specifies that expiration warning messages begin on November 1, 2010.
- Lines 4 through 5: This entry specifies that six of the standard holidays be observed. Since the YEAR Operand has not been specified, these holidays occur every year.
- Lines 6 through 7: This entry specifies that 'Christmas Eve' is a holiday only in 2010.
- Lines 8 through 9: This entry specifies that the standard holiday 'Veterans day' will only be observed in 2010.
- Lines 10 through 11:This entry specifies that the holiday 'New Years Eve' will be observed in any year in which it falls on a weekday.
- Line 12: This Operand is required. It must be the last macro entry in your Holiday Table.

Sample JCL

You can use the following sample JCL to generate your holiday table. Change the LIBDEF to point to the desired Load Library:

```
1...5...10....16..20...25...30...35          ..72
// JOB jobname
// LIBDEF PHASE,CATALOG=lib.sublib
// OPTION CATAL
   PHASE BIMHDY00,*
// EXEC ASSEMBLY
    BIMHDAY TYPE=INITIAL
    ...
    ...
    BIMHDAY TYPE=FINAL
    END
/*
// EXEC LNKEDT
/&
```

Controlling RAAD

RAAD operation is controlled from the RAAD System Status Display. There you can use the command line to control RAAD through use of the following commands:

CMD	Description
CLOSE	Quiesces, or inactivates, the RAAD system and closes all RAAD files. You cannot exit the System Status display while the files are closed.
END	Stops all RAAD processes. The files remain open.
OPEN	Opens the RAAD files and activates the system.
QCOPY	Starts the QCOPY Scheduling Process.
QUIES	Quiesces, or inactivates, the RAAD system. When in Quiesced state, RAAD automated processes are suspended and no I/O activity to the RAAD dataset takes place. Since CSIQCOPY jobs accessing RAAD information time out in two minutes when the system is Quiesced, use care when executing this command.
RESTART	Restarts RAAD by performing the same processing that is done during CICS startup through the PLTPI. This involves extensive file operations and can take several seconds to complete. You will not need to use this option during normal operation but may be asked to use it by CSI Technical Support
START	Starts RAAD by initiating the automated processes.
STOP	Stops RAAD automated processes but does not quiesce the system.

When these commands are issued, you may receive the "COMMAND NOT ALLOWED" error response. This message arises when you attempt to issue one of the commands above when the system is in an improper state to process the command. An example is issuing the "START" command when the system has not been previously "STOPPED."

The body of the screen allows you to verify and control the state of the various processes of the RAAD system. Each line is comprised of three parts:

- Name—The name of the RAAD process
- Status—The current Status of the RAAD process
- Action—Activate or inactivate control

RAAD Process Name	Status	Status Descriptions
External Device Writer	INACTIV	External Device Writer is not started in CICS.
	WAIT CN	External Device Writer is started in CICS and is awaiting activation at the VSE Console.
	ACTIVE	External Device Writer is started in CICS and accepting jobs from VSE/POWER.
Spooler Polling	INACTIV	Spooler Polling is not active.
	ACTIVE	Spooler Polling is active and periodically scanning your spooler queues.
CGI (Web) Interface	INACTIV	Web Access to RAAD is unavailable.
	ACTIVE	Web Access to RAAD is available
Cross Partition	INACTIV	Cross partition access to RAAD is not available.
	ACTIVE	Cross partition access to RAAD is available.
TCP/IP	INACTIV	TCP/IP cross partition access to RAAD is unavailable.
	ACTIVE	TCP/IP cross partition access to RAAD is available.
XPCC	INACTIV	XPCC cross partition access to RAAD is unavailable.
	ACTIVE	XPCC cross partition access to RAAD is available
Daily Reports	" "	Daily Reports are not running.
	RUNNING	Daily reports are currently running. It can take several seconds for the Daily Reports to complete.
Daily Purge	" "	Daily Purge is not running.
	RUNNING	Daily Purge is currently running. Depending on the size of the RAAD dataset, it can take several minutes for the Daily Purge to complete.

Controlling the External Device Writer

Activating the External Device Writer

Activating the External Device Writer Facility is a two-step process. These steps can be performed in any order:

Activate the External Device Writer in CICS.

This can be done manually through the System Status Display (see page 91), or automatically through the CICS PLT (see page 202). After the External Device Writer has been activated, you will see the following message on the VSE console:

```
CSIRAA30-069 READY FOR POWER CONNECT
```

Identify the External Device Writer to VSE/POWER

This must be done at the system console and consists of entering the following VSE/POWER command:

```
PSTART DEV,xxxxxxxx,raad,cccc
```

where:

xxxxxxxx is the POWER device name. This name serves as the name of the device for future POWER Commands. It is one of the destinations that POWER directs to this device. All other POWER Commands require this name.

raad is the External Device Writer ID. As installed, this is "RAAD." It can be changed using the System Configuration screen (see page 97).

cccc is one to four POWER classes that you want to direct to RAAD.

Note: CSI produces several different Console utilities that allow you to enter VSE Console Commands directly from any CICS terminal

For example:

```
PSTART DEV,CSI,RAAD,R
```

Activates the POWER External Device Writer known as "RAAD" on class R with a name of "CSI."

You can add the POWER PSTART Command to your ASIPROC to cause the External Device Writer to be automatically activated each time you IPL your system.

When successfully activated, you will see the following on the VSE console:

```
1QY3I DEVICE xxxxxxxx STARTED, DDS=raad, TIME=hh:mm:ss
CSIRAA30-070 SUCCESSFULLY ACTIVATED CLASS=cccc
```

If reports are waiting for archive processing, RAAD begins to process them. If there are no reports currently available, or after all reports have been processed, POWER issues another message:

```
1QY2I DEVICE xxxxxxxx WAITING FOR WORK, DDS=raad
```

This is like controlling a physical printer. When reports become available, RAAD automatically processes them.

Status Inquiry from VSE/POWER

You can check on the status of the RAAD-to-POWER connection at any time by issuing a PINQUIRE command at your VSE System Console:

```
PINQUIRE DEV=xxxxxxxx
```

This returns a three-line summary that looks something like:

```
1R78I DEVICE xxxxxxxx WAITING FOR WORK
1R78I CLASSES: cccc - QUEUE: L
1R78I DESTINATION: xxxxxxxx yyyyyyyy
```

The exact contents of the PINQUIRE response vary depending on the RAAD options in effect and the current status of the External Device Writer in your system.

Stopping the External Device Writer from RAAD

To stop the External Device Writer from RAAD, proceed to the RAAD System Status Display. There are two different ways of stopping the External Device Writer:

On the CMD: line, enter “STOP.” This stops all RAAD activity including the External Device Writer.

On the “External Device Writer” line, key in any character next to Inactivate and press ENTER. This stops only the External Device Writer, all other facilitates of RAAD continue to operate.

If a report is currently being processed when a P CMD is entered, RAAD attempts to

- Close off the report on the RAAD dataset and flag the report as incomplete, and
- Instruct POWER to dispose of the report using the specified RAAD Abnormal Completion options.

Stopping the External Device Writer from VSE/POWER

To stop the RAAD External Device Writer from VSE/POWER, you must use the POWER PSTOP command at your VSE System Console. There are several ways of entering the PSTOP command:

- PSTOP DEV,xxxxx—This causes RAAD to stop processing immediately.
- PSTOP DEV,xxxxx,FORCE—Occasionally, the PSTOP above does not work, for example, if it is entered before a PSTART has successfully completed during a communication session between POWER and RAAD. The FORCE option insures that the PSTOP is processed immediately.
- PSTOP DEV,xxxxx,EOJ—RAAD continues processing the current report. It stops when the current report is completed.
- PSTOP DEV,xxxxx,RESTART—The RESTART option is not supported. This command functions the same as if "RESTART" were omitted.
- PFLUSH DEV,xxxxx—RAAD treats this command similar to PSTOP. RAAD attempts to clear up the data file of any records written for the currently processing report.

Note: RAAD cannot affect report completion if the "PFLUSH" command is used. POWER does not allow an External Device Writer an option in this case. The input report is processed according to the normal POWER DISP rules.

POWER issues a message whenever the External Writer is stopped:

```
1QY4I DEVICE xxxxxxxx STOPPED BY OPERATOR, DDS=raad
```

If a report is currently being processed when a PSTOP command is encountered, RAAD attempts the following

- The report is closed off on the RAAD dataset and flagged as incomplete
- RAAD instructs POWER to dispose of the report using the specified RAAD Abnormal Completion options.

PSTOP processing can result in stray records on the RAAD dataset. Use the RECOVER command in batch processing to verify the status of the disk file(s).

Note: PSTOP...EOJ is deferred until the current report is complete. If you use this option, there is less risk of incomplete reports on the Archive Dataset.

RAAD Web Interface

RAAD provides a limited Web Interface for your use. The operational components of RAAD are available through the Web Interface, the customization components are not. The RAAD Web Interface allows you to access:

- RAAD Queue Display for all RAAD supported Spooler Queues
- RAAD View Display
- RAAD System Status Display
- RAAD Control Devices Display.

All features provided through the 3270 interface are available for the RAAD Queue Display, RAAD View Display, and RAAD System Status Display through the Web Interface. The RAAD Control Devices Display is slightly different. From the RAAD Web Interface, you cannot link off to the RAAD Device Definition Display using the "Edit" command. In all other respects, the RAAD Control Devices Display functions the same through the Web Interface as it does through the 3270 interface.

Accessing RAAD through the Web

To access RAAD through the web:

You must enable the Web Interface through the RAAD System Configuration Display (see page 97). Also, verify that the settings for the Web Interface Configuration (see page 104) are correct. Make sure that you have created and added the Web Skeleton as described in the Web Interface Configuration.

Use the following link with your favorite Web Browser:

`http://128.000.000.200:8078/RAADWEBX`

where: the IP address is the address of your host system, and the ":8078" following the IP address matches the port you supplied for the Web Interface Customization.

Note 1: Web access has been accomplished with Netscape Navigator™, Internet Explorer™, and Opera™.

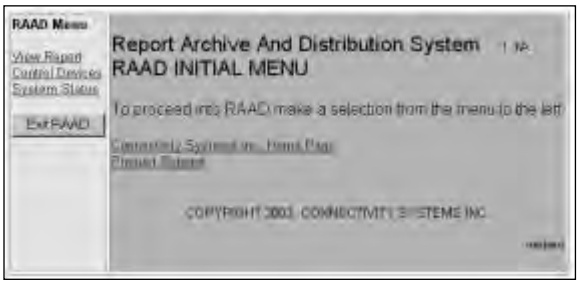
You will receive the RAAD Sign On Display in HTML format.

Note 2: You must sign on when using the Web Interface.

Enter your User ID and Password and press the button labeled “Signon to RAAD.”

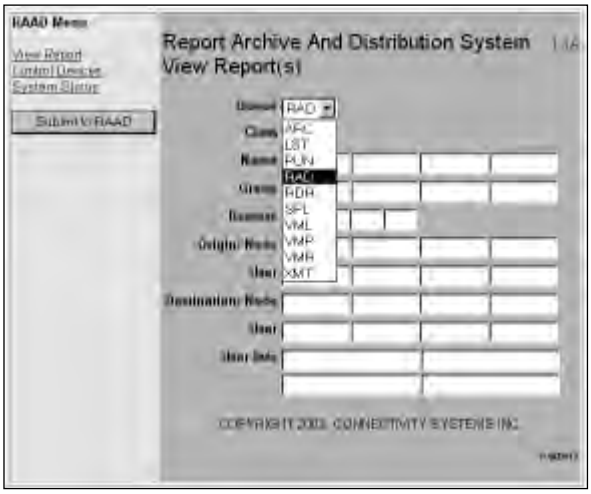
Using the RAAD Web Interface

After you have signed on the RAAD through the Web, you receive the HTML form shown below:

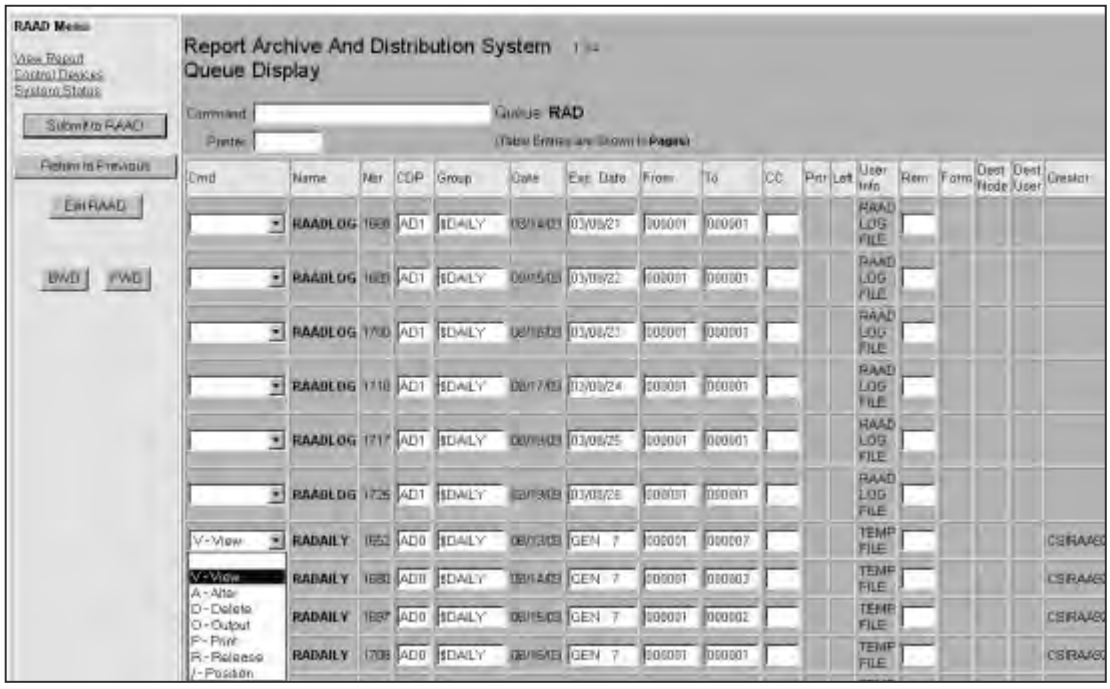


Unlike the 3270 interface, the RAAD Menu is always available when accessing RAAD through the Web. The RAAD Menu is displayed to the left side of the HTML form. Click on one of the links on the RAAD Menu to proceed.

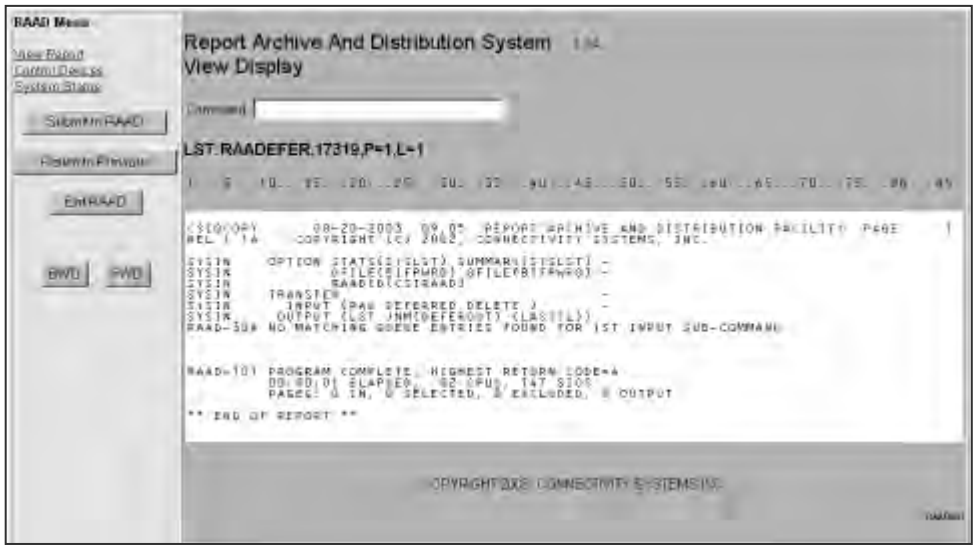
The various HTML forms provided by RAAD function in much the same way as the 3270 interface described above. Drop-down boxes are used, where possible, to allow for point-and-click processing of input information. The individual HTML forms are shown below:



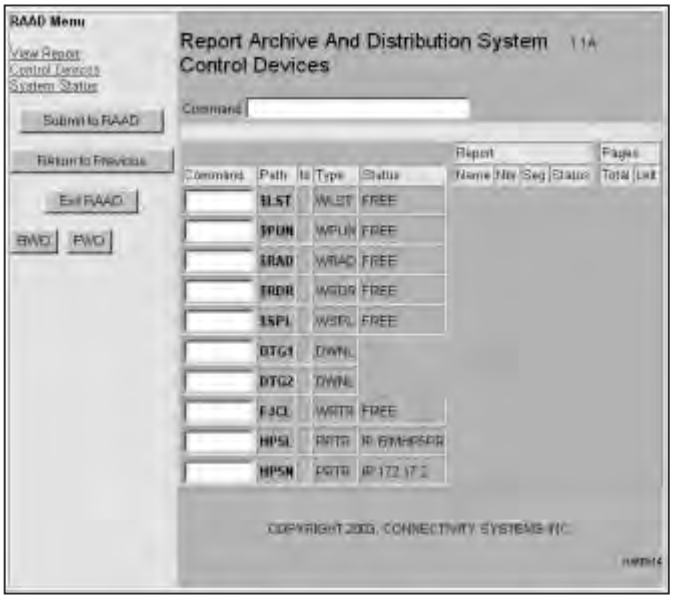
The RAAD View Reports Display provides a drop-down box for the Queue selection. Only those queues authorized for this particular user are shown.



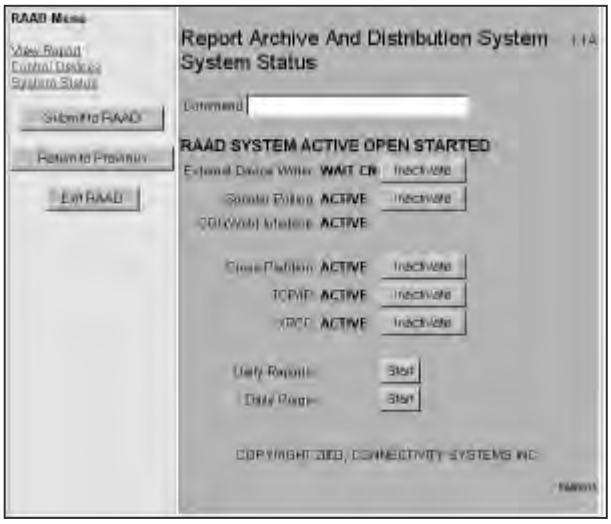
This is a portion of the RAAD Queue Display for the “RAD” queue. Here we are setting up to view report “RADDAILY.”



This is the View Display of a comparatively small report. RAAD does not send the entire report to the Web Browser. Instead, it sends as much as will fit in its internal buffer (16,384 bytes). The number of lines returned vary depending on the length of the lines in the report being viewed. Use the “BWD” and “FWD” buttons to scroll through the report in the same fashion that the PF7 and PF8 keys are used in the 3270 interface.



This is the RAAD Control Devices Display as an HTML form. There are no devices active in the sample shown above.



This is the RAAD System Status Display as an HTML form. Here buttons are used to handle some of the display functions.

Note: You cannot render the Web Interface inactive through the Web Interface.

RAAD (SPL) Online Spooling Facility

The Online Spooling Facility of RAAD provides an interface to your CICS Command Level application programs for the generation of reports or jobstreams. The reports and/or jobstreams are “spooled” by RAAD to an internally generated “Online Spool Queue.”

The power of the RAAD Online Spooling Facility becomes apparent when you combine it with the RAAD Spooler Polling Facility. These two facilities, when used together, provide a completely automatic report routing and spooling function for your CICS application programs. Your CICS applications can:

- Generate reports to be automatically routed to a particular CICS printer.
- Generate reports to be automatically spooled to the POWER LST, PUN, or RAD queues.
- Generate Jobstreams to be automatically spooled to the POWER RDR queue for execution.

Automatic Report Headings and Footings

RAAD provides support for automatically generating report headings and/or footings for spooled reports. You supply the data for the headings and footings as separate calls of the RAAD Spooling Facility.

You can define as many headings and or footing lines as necessary. Using either the FCB or the number of lines per page specified in the call, RAAD determines the number of body lines available in the report.

Heading and Footing lines are treated the same as any report line. You can specify any carriage control you want on the Heading and Footing lines, including channel skips. It is not necessary to supply a skip to channel 1 in the heading, since that is performed automatically by RAAD.

RAAD provides several variables to assist you in generating meaningful headings and/or footings. These variables can be placed anywhere in the Heading or Footing Data. The variables are replaced at the time the report is spooled into the Online Spool Queue. The date and time fields are based on when the report is opened for spooling.

Variable	Replaced With
<N>	*n* spaces
<NN>	*nn* spaces
<NNN>	*nnn* spaces

Variable	Replaced With
## ### ####	page number
HH:MM HH:MM:SS HH.MM HH,MM.SS	Job Start Time
MM/DD/YYYY MM/DD/YY YYYY/MM/DD YY/MM/DD YYYY/MM YY/MM MM/YYYY MM/YY DD/MM/YYYY DD/MM/YY	Job Start Date
YYYY/DDD YY/DDD	Job Start Julian Date

Example

Suppose you supplied two heading lines to RAAD, where the first byte is the carriage control specified in ASA-space is space 1 then print:

```
" MM/DD/YY        REPORT HEADING             PAGE ###"
" HH:MM:SS          SUB-HEADING                     "
```

The resulting page heading would look like:

```
"12/02/02        REPORT HEADING            PAGE   3"
"12:25:15          SUB-HEADING                     "
```

Spooling Parameter Area

The table below describes the Spooling Parameter Area in detail. For each field, the Assembler label and COBOL description are shown followed by a description of the contents of the field.

Assembler Label	COBOL and Description
SPL1HD	`05 RAADSPL-HEADER PIC X(8) VALUE 'CSIRAASP'.` This identifies the parameter area to CSIRAASP. It must contain "CSIRAASP."
SPL1FUNC	`05 RAADSPL-FUNCTION PIC X.` Function request for this call to CSIRAASP. It can be one of the following: • **W**—Write: Write one or more lines to the spooled report. If this is the first attempt to write data to the report, the report is opened. • **O**—Close: Close the report, add page footings if necessary and perform completion processing (see below). • **A**—Close, Append: Close the report, but mark it for later resumption. You must save the token (SPL1TOKN) returned from this call in order to access the report later. • **H**—Header: Define page headings for this report. • **F**—Footer: Define page footings for this report.
SPL1RET	`05 RAADSPL-RETURN PIC X VALUE '0'.` Return code from CSIRAASP. This can be one of the following: • **0**—Good response. • **1**—Error occurred during processing. A human readable message is placed in SPL1MSG (see below) for problem resolution. • **2**—Parameter format error. A human readable message is placed in SPL1MSG (see below) for problem resolution.
SPL1DFMT	`05 RAADSPL-DATAFORMAT PIC X VALUE 'E'.` The ending value must be 'E'.
SPL1CCF	`05 RAADSPL-CARRIAGECONTROL PIC X.` Format of the carriage control for this report. All lines in the report, including headings and footings, must use the same format for the carriage control. It can be one of the following: • **M**—Machine control, generally of the form print-then-space. • **A**—ASA control, generally of the form space-then-print.

Assembler Label	COBOL and Description

SPL1LFMT	05 RAADSPL-LINEFORMAT PIC X.
	Determines the format of the text data being sent to CSIRAASP. This can be one of the following:
	• **F**—Fixed length lines. Data is presented to CSIRAASP here as an array of fixed length data items, the first byte of which is the carriage control. For example:
	`05 DATA-LINE OCCURS nnn TIMES`
	`10 LINE-CC PIC X.`
	`10 LINE_DATA PIC X(80).`
	• **V**—Variable length lines. Data is presented to CSIRAASP here as a block of variable length data items which consist of a length, carriage control and text data. For example:
	`DATALINE EQU *`
	`DATALEN DS AL2 LENGTH OF DATA PLUS THREE`
	`DATACC DS X CARRIAGE CONTROL`
	`DATADATA EQU * VARIABLE LENGTH LINE STARTS HERE`

SPL1RCOV	05 RAADSPL-RECOVER-SWITCH PIC X VALUE 'N'. As a rule, if CICS terminates in the midst of spooling a report due to some cause outside of RAAD, the spooled report is lost when CICS is restarted. If you want RAAD to keep the report, place a 'Y' here. See Spool Report Recovery below for more information.
SPL1TOKN	05 RAADSPL-TOKEN PIC X(36) VALUE LOW-VALUES. The token uniquely identifies this report to RAAD. It must be set to LOW-VALUES on the first call to CSIRAASP for a report and returned as received for all subsequent calls to CSIRAASP. If multiple CICS programs are involved in the creation of this report, this token must be passed among them to ensure that the report is built correctly. If you have previously closed the report with Close,Append (see SPL1FUNC above), then you must supply the token from the Close,Append call when subsequently writing to this report.
SPL1ROUT	05 RAADSPL-ROUTRTO PIC XXXX. VALUE SPACES. If the ID of a RAAD Device is put here when you close the report, the report will be immediately routed to that device. If omitted, RAAD Spooler Polling will be invoked to route the report to its ultimate destination. See below for more information.
SPL1LPPG	05 RAADSPL-LINESPERPAGE PIC S9(4) COMP. You can optionally specify the number of lines per page here. If you do so, this number is used instead of that determined from examining the FCB.

Assembler Label	COBOL and Description
SPL1LLN	`05 RAADSPL-LINELENGTH PIC S9(4) COMP.` If you are processing fixed length lines, then the total line length must be supplied here. This length is the length of the data line plus one for the carriage control. For example, if you are generating 80-byte lines, then this length must be 81. **Note:** This field is ignored for variable length lines.
SPL1LBK	`05 RAADSPL-LINESPERBLOCK PIC S9(4) COMP.` If you are processing fixed length lines, then the maximum number of lines in the buffer must be supplied here. **Note:** This field is ignored for variable length lines.
SPL1BSZ	`05 RAADSPL-BLOCKSIZE PIC S9(4) COMP.` If you are processing variable length lines, then put the size of the variable length buffer here. **Note:** This field is ignored for fixed length lines.
SPL1LINZ	`05 RAADSPL-LINESSENT PIC S9(4) COMP.` Regardless of the line format, you must supply the count of lines in the current request in this field. CSIRAASP does nothing if this field is set to zero.
SPL1JNAM	`05 RAADSPL-JOBNAME PIC X(8).` Enter the name of this report here. If omitted, CSIRAASP uses “AUTONAME” for the job name. This field is only recognized on the first write to CSIRAASP.
SPL1CLAS	`05 RAADSPL-CLASS PIC X. VALUE 'A'.` Enter report class here. If omitted, CSIRAASP defaults to CLASS=A. This field is only recognized on the first write to CSIRAASP.
SPL1DISP	`05 RAADSPL-DISP PIC X. VALUE 'D'.` Enter the report disposition here. If omitted, CSIRAASP defaults to DISP=D. This field is only recognized on the first write to CSIRAASP.
SPL1PRI	`05 RAADSPL-PRI PIC X. VALUE '3'.` Enter the report priority here. If omitted, CSIRAASP defaults to PRI=3. This field is only recognized on the first write to CSIRAASP.
SPL1CC	`05 RAADSPL-COPYCNT PIC 99. VALUE ZERO.` Optional field, if present specifies the number of copies of this report. A value of zero or one is treated the same. This field is only recognized on the first write to CSIRAASP.
SPL1CRTR	`05 RAADSPL-CREATOR PIC X(8) VALUE SPACES.` Optional field, if present allows you to specify the equivalent to POWER Origin Node. This field is only recognized on the first write to CSIRAASP. If omitted, CSIRAASP sets the field equal to the transaction ID followed by the terminal ID for this request (EIBTRNID and EIBTRMID respectively).

Assembler Label	COBOL and Description
SPL1OWNR	`05 RAADSPL-OWNER PIC X(8) VALUE SPACES.` Optional field, if present allows you to specify the equivalent to the POWER Origin User. This field is only recognized on the first write to CSIRAASP.
SPL1INFO	`05 RAADSPL-USERINFO PIC X(16) VALUE SPACES.` Optional field, if present allows you to specify the equivalent to the POWER * $$ LST USER= operand. This field is only recognized on the first write to CSIRAASP.
SPL1SYID	`05 RAADSPL-SYSID PIC 9 VALUE ZERO.` Optional field, if present allows you to specify the equivalent to the POWER SysId. This field is only recognized on the first write to CSIRAASP.
SPL1JSEP	`05 RAADSPL-JSEP PIC 99 VALUE ZERO.` Optional field, if present allows you to specify the JSEP count. This field is only recognized on the first write to CSIRAASP.
SPL1REM	`05 RAADSPL-REMOTE PIC 999 VALUE ZERO.` Optional field, if present allows you to specify a Remote ID for this report. This field is only recognized on the first write to CSIRAASP.
SPL1FORM	`05 RAADSPL-FORMSID PIC XXXX VALUE SPACES.` Optional field, if present allows you to specify a four character forms ID. This field is only recognized on the first write to CSIRAASP.
SPL1DEST	`05 RAADSPL-DESTNODE PIC X(8) VALUE SPACES.` Optional field, if present allows you to specify the equivalent of the POWER Destination Node. This field is only recognized on the first write to CSIRAASP.
SPL1DUSR	`05 RAADSPL-DESTUSER PIC X(8) VALUE SPACES.` Optional field, if present allows you to specify the equivalent of the POWER Destination User. This field is only recognized on the first write to CSIRAASP.
SPL1FCB	`05 RAADSPL-FCB PIC X(8) VALUE '$$BFCB00'.` Optional field, if present allows you to specify the FCB for this report to be used when the report is printed. If omitted, RAAD uses the default FCB defined for the RAAD Device. “RAAD Device Definition,” page 70). This field is only recognized on the first write to CSIRAASP.
SPL1MSG	`05 RAADSPL-MESSAGE PIC X(80) VALUE SPACES.` In the event of an error return from CSIRAASP, a human readable message is placed here to describe the failure for problem resolution. For a good response, this field is blank.

Using the RAAD Spooling Facility

Communications with the RAAD Spooling Facility is done through an EXEC CICS LINK with a RAAD defined COMMAREA. The source layout of this COMMAREA is supplied in two separate copy books:

- RAADSPLA—BAL (Assembler) format
- RAADSPLC—COBOL format.

Your program must contain the following CICS Command level statements:

```
EXEC  CICS LINK                ,
      PROGRAM  (CSIRAASP)      ,
     COMMAREA (RAADSPL-PARM)  ,  (For BAL : COMMAREA
(SPLP1DS)
      LENGTH   (LENGTH)       .
```

How to use the Spooling Facility

Writing or modifying a CICS application program to generate a report using the RAAD Online Spooling Facility is essentially the same as creating a batch report. The following sections provide a systematic description of how it is done.

For this example, we assume that we are using COBOL with fixed line format. In WORKING-STORAGE we have coded:

```
COPY RAADSPLC.
05  RAADSPL-LINES OCCURS 20 TIMES.
    10  RAADSPL-CC       PIC X.
    10  RAADSPL-LINE     PIC X(132).
```

In the PROCEDURE DIVISION, we have a paragraph that looks like:

```
LINK-TO-CSIRAASP.
    EXEC CICS LINK               ,
         PROGRAM (CSIRAASP)      ,
         COMMAREA (RAADSPL-PARM) ,
         LENGTH   (2916)        .
```

1. Initializing Access to CSIRAASP

Certain portions of the Spool Parameter Area must be set up prior to linking to CSIRAASP. See the example below:

```
MOVE LOW_VALUES TO RAADSPL-PARM.
MOVE 'CSIRAASP' TO RAADSPL-HEADER.
MOVE 'E'        TO RAADSPL-DATAFORMAT.
```

When initially creating the report, you must set up the job information in the following format:

```
MOVE jobname    TO RAADSPL-JOBNAME.
MOVE class      TO RAADSPL-CLASS.
MOVE disp       TO RAADSPL-DISP.
```

```
MOVE priority   TO RAADSPL-PRI.
```

These fields are optional.

```
MOVE copycount  TO RAADSPL-COPYCNT.
MOVE creator    TO RAADSPL-CREATOR.
MOVE owner      TO RAADSPL-OWNER.
MOVE userinfo   TO RAADSPL-USERINFO.
MOVE sysid      TO RAADSPL-SYSID.
MOVE jsep       TO RAADSPL-JSEP.
MOVE remoteid   TO RAADSPL-REMOTE.
MOVE formsid    TO RAADSPL-FORMSID.
MOVE destnode   TO RAADSPL-DESTNODE.
MOVE destuserr  TO RAADSPL-DESTUSER.
MOVE fcb        TO RAADSPL-FCB.
```

Establish the data format, using code similar to the following:

```
MOVE 'A'        TO RAADSPL-CARRIAGECONTROL.
MOVE 'F'        TO RAADSPL-LINEFORMAT.
MOVE lines/page TO RAADSPL-LINESPERPAGE. (optional)
MOVE 133        TO RAADSPL-LINELENGTH.
MOVE 20         TO RAADSPL-LINESPERBLOCK.
```

2. Add Headings and Footings

If you do not want CSIRAASP to produce Headings and/or Footings, proceed to step 3. Set up as many lines as desired for Headings, and then add:

```
MOVE 'H'        TO RAADSPL-FUNCTION.
MOVE linecount  TO RAADSPL-LINESSENT.
PERFORM LINK-TO-CSIRAASP.
```

If you also want footings, set up the footing line(s) and then add:

```
MOVE 'F'        TO RAADSPL-FUNCTION.
MOVE linecount  TO RAADSPL-LINESSENT.
PERFORM LINK-TO-CSIRAASP.
```

You can specify footings without headings, but if have both headings and footings, headings must be established before footings.

3. Create body of the report

Create your report lines, when your buffer is full or your report is complete then add

```
MOVE 'W'        TO RAADSPL-FUNCTION.
MOVE linecount  TO RAADSPL-LINESSENT.
PERFORM LINK-TO-CSIRAASP.
```

Note: When your report is complete, prior to issuing the close request, you must flush your report buffer of any remaining lines.

4. Close the report

If you wish to close the report for later appending, proceed to step 5 below, otherwise make sure you have flushed your buffer of any remaining print lines.

If your program knows where to print the report, then add:

```
MOVE deviceid   TO RAADSPL-ROUTRTO.
```

Then issue the close request.

```
MOVE 'O'        TO RAADSPL-FUNCTION.
MOVE linecount  TO RAADSPL-LINESSENT.
PERFORM LINK-TO-CSIRAASP.
```

This closes the report. If a valid device is supplied in RAADSPL_ROUTRTO, the report is immediately sent to that RAAD Device for processing. If you did not specify a device, or the Device ID is invalid, RAAD looks through the Spooler Polling list and routes the report accordingly.

5. Close the report for later resumption

First, make sure you have flushed your buffer of any remaining print lines, then issue the close,append request.

```
MOVE 'A'        TO RAADSPL-FUNCTION.
MOVE linecount  TO RAADSPL-LINESSENT.
PERFORM LINK-TO-CSIRAASP.
```

Then you must save the token returned in RAADSPL-TOKEN and make it available to the next program that wishes to write to this particular report.

Note 1: The next program to write to this report must move the saved token into RAADSPL-TOKEN prior to issuing any requests to CSIRAASP.

Note 2: Only the first program to process this type of report is allowed to issue Heading and/or Footing requests for the report.

SPL reports appear in the RAAD Queue Display as they are being created. These reports have a status of “OPEN” or “APEND” depending on their state. See the “RAAD Queue Display,” page 111, for more information.

Spool Report Recovery

The length of time that Spool Reports are retained on the RAAD file is dependant on several things:

- Retention established in the $SPL Catalog Definition.
- Whether RAAD has been initialized in CICS and if so, if the Spool Reports have been flagged as recoverable. Unless flagged as recoverable, any open Spool Reports are deleted when RAAD is initialized in CICS, either because of cycling CICS or by command from the RAAD System Status Display. This also applies to reports closed for append.

Note: You can only continue to write to an appendable report if you save the token in some manner that can survive a CICS shutdown; you cannot be re-access a nonappendable open report following a CICS shutdown.

- Whether there are instructions to retain the Spool Report after it has been processed by a RAAD Device. In the absence of instructions to the contrary, a Spool Report is deleted after it has been either processed by a RAAD Device through the Power Polling Facility, or specifically directed to a report by supplying a Device ID in field RAADSPL-ROUTRTO.
- Whether the device completion specifies delete. Device completion may specify delete, in which case the Spool Report is deleted immediately unless you have specified "Deferred Delete" on the $SPL Catalog.

Note: CSI does not recommend that you use the "Deferred Delete" option with the $SPL Catalog.

- Whether an authorized user has deleted a Spool Report. Any user authorized to access the SPL queue can delete any closed Spool Report if allowed in the user's User Profile.

The SPL queue is envisioned by CSI as a temporary resting place for reports and/or jobstreams destined for somewhere else, usually either printed or directed to one of the POWER queues. CSI recommends that you use a one-day retention period and that you not utilize the "Deferred Delete" option for the SPL queue. Depending on how much you utilize the SPL queue in your programs, it can rapidly grow to an unmanageable size.

RAAD Online Spooling Facility for BIM-PRINT Users

As seen from the discussion above, the RAAD Online Spooling Facility is an easier to use and a more simplified interface than what was offered with BIM-PRINT.

While conversion is not a major problem, RAAD supplies an interface program, CSIPRTSP, which takes the data created in BIM-PRINT format and converts it to RAAD format for you.

You can use this program in one of two ways: either change your program to link to CSIPRTSP instead of BIMPRTSP, or rename CSIPRTSP to BIMPRTSP and all of your CICS applications will begin to use RAAD for Online Spooling.

Not every function available to BIM-PRINT users is supported in CSIPRTSP for RAAD. The following table lists the BIM-PRINT functions and describes the corresponding processing by CSIPRTSP.

BIM-PRINT Function	CSIPRTSP Processing
CA—Close Abnormal	Function Fully Supported.
CF—Close Final	Function Fully Supported.
CR—Close Resume	Function Fully Supported.

BIM-PRINT Function	CSIPRTSP Processing
DH—Define Header	Function Fully Supported.
DF—Define Footer	Function Fully Supported.
IF—Inquire Footer	Function not Supported
IH—Inquire Header	Function not Supported
IS—Inquire Spoolid	Function not Supported
ON—Open New	Function Simulated
OR—Open Resume	Function Simulated
SG—Segment Next	Function not Supported
SI—Segment Now	Function not Supported.
WD—Write Data	Function Fully Supported.

The CSIPRTSP processing listed for each BIM-PRINT Function is defined as:

- **Function Not Supported—**There is no equivalent functionality within RAAD (IF, IH, IS, SG, SI). An error response is returned along with the message:
  `"FUNCTION NOT SUPPORTED BY RAAD."`
- **Function Simulated**—There is no equivalent functionality within RAAD (ON, OR). However, these functions are simulated internally and you will receive a normal response from CSIPRTSP.
- **Function Fully Supported**—These functions work as you currently expect them to work using BIM-PRINT (CA, CF, CR, DF, DH, WD).

Extended functionality available through RAAD is not supported when using CSIPRTSP. These restrictions are summarized below:

```
RAADSPL-RECOVER-SWITCH  (SPL1RCOV)
```

These are not available. All reports generated through CSIPRTSP are considered non-recoverable, meaning that open reports are deleted when CICS is cycled or RAAD is initialized.

```
RAADSPL-CREATOR         (SPL1CRTR)
RAADSPL-OWNER           (SPL1OWNR)
RAADSPL-SYSID           (SPL1SYID)
```

There are no equivalent fields in BIM-PRINT Online Spooling, so these fields cannot be used when generating Spooled output through CSIPRTSP.

Notice that the size of the RAAD token differs from the size of the BIM-PRINT token. This difference is taken care of automatically by CSIPRTSP and does not pose a problem, provided, of course, that you do not attempt to interpret the contents of the BIM-PRINT token in your program.

Debugging Your Spooling Program

To assist you in debugging, as well as providing assistance for remote support, RAAD supplies a tracing facility that shows details of the SPL generation process. This trace facility is controlled through the RAAD System Status Display and is described more fully in that section of the manual. In brief:

On the command line in the System Status Display, enter “TRACE SPL”

- Run your SPL program.
- Return to the System Status Display and enter “TRACE SPL” to turn off the trace.
- Access the RAD queue, group “$LOG.” In the RAD queue is a report named “TRCESPLQ” which shows the parm areas involved in your SPL request.

Traces are produced for both accessing RAAD directly using CSIRAASP or through the BIM-PRINT compatibility process using CSIPRTSP.

RAAD Printer Exit Facility

RAAD provides a convenient and easy to use Printer exit facility that allows you to:

- Approve or deny printing of individual reports,
- Alter the process undertaken by RAAD when printing is complete,
- Alter the characteristics of the Printer to suit the report being printed,
- Add, change, or remove printer control sequences for the report.

RAAD Printer Exit Programs can be written in either COBOL or BAL. They must be CICS programs and are entered from RAAD using an EXEC CICS LINK command. The parameter area is passed through the CICS LINK in the COMMAREA. The module must return to RAAD using an EXEC CICS RETURN command.

Two copy books were installed that describe the format of the parameter area:

- RAADEXPA—BAL (Assembler) version, and
- RAADEXPC—COBOL version.

You can include them in your program by using the appropriate COPY command in your source code.

The name of the Printer Exit Program must be entered in the Printer Definition screen. See “RAAD Device Definition,” page 70). When RAAD encounters an exit name, it attempts to issue a CICS LINK to that program. If the program cannot be found by CICS, RAAD issues the following message into the RAAD Log and continue processing as if no exit were specified:

```
CSIRAA42-083 Exit Program Not Available
(XXXX:YYYYYYYY)
```

where *XXXX* is the RAAD Device ID of the printer and *YYYYYYYY* is the exit program name.

RAAD Printer Exit Parameter Area

The Table below describes the RAAD Printer Exit Parameter Area. Both the COBOL and Assembler definitions are shown for each field in the Parameter Area along with a brief description of their contents. Each field is marked as either:

INFO—Informative only and cannot be changed by the Exit

CHANGE—Field can be changed to alter RAAD processing.

Parameter Heading Data

Assembler Label	Field Type	COBOL and Description
EXHDR	INFO	`05 RAADEXIT_HEADER PIC X(8) VALUE 'CSIRAA42'.` Identifies the Parameter Area.

EXINITS
EXTERMS
	CHANGE	`05 RAADEXIT-INIT-STR PIC S9(7) COMP.`
		`05 RAADEXIT-TERM-STR PIC S9(7) COMP.`
		Address of Printer Initialization and Termination String work areas. As a convenience to COBOL programmers, on initial entry from RAAD, these addresses have been pre-loaded with the addresses of RAADEXIT-INIT-WORK and RAADEXIT-TERM-WORK (EXINITW and EXTERMW in BAL). Both of these work areas are 1,024 bytes long. If that is not sufficiently long enough, you can point RAAD to storage elsewhere but you will probably have to code your exit in assembler.
		
		Note: This address and the data must be in 24-bit storage.

EXINITL
EXTERML
	CHANGE	`05 RAADEXIT-INIT-LEN PIC S9(4) COMP VALUE ZERO.`
		`05 RAADEXIT-TERM-LEN PIC S9(4) COMP VALUE ZERO.`
		Lengths of the strings pointed to above. RAAD only processes a string if it encounters a non-zero length value here.

EXSTATS	CHANGE	`05 RAADEXIT-STATUS PIC X.` Place an 'R' here to cause RAAD to reject the printing request. RAAD checks for this and if an 'R' is located here, will cancel the print request and perform abnormal completion on the input report.
EXQUE	INFO	`05 RAADEXIT-QUEUE PIC XXX.` Source queue for this report.
EXSTRTBY	INFO	`05 RAADEXIT-STARTBY PIC X.` Indicates whether printing was started by page ('P') or line ('L').

EXSLINE
EXELINE
	INFO	`05 RAADEXIT-FIRST-LNPG PIC S9(7) COMP.`
		`05 RAADEXIT-LAST-LNPG PIC S9(7) COMP.`
		Beginning and ending range to be printed. Depending on the value of RAADEXIT-STARTBY (EXSTRTBY), the number represents either lines or pages.

Normal and Abnormal Completion

Assembler Label	Field Type	COBOL and Description
EXNORML	CHANGE	`05 RAADEXIT-NORMAL-COMPLETION.` Identifies the type of completion processing.
XNCMPACT	CHANGE	`10 RAADEXIT-COMP-ACT PIC X.` Determines the processing that RAAD takes on completion. This can be any of the following: • X—Delete • L—Leave in queue • D—POWER Disposition Processing • A—Alter

XNCMPCLS
XNCMPDSP
XNCMPPRI
XNCMPSYI
	CHANGE	`10 RAADEXIT-COMP-CLASS PIC X.`
		`10 RAADEXIT-COMP-DISP PIC X.`
		`10 RAADEXIT-COMP-PRI PIC X.`
		`10 RAADEXIT-COMP-SYSID PIC X.`
		Class, Disposition, Priority, and Sysid are only referenced if Alter is specified above.

XNCMPREM	CHANGE	`10 RAADEXIT-COMP-REM PIC S999 COMP-3.` Remote is only referenced if Alter is specified above. To alter a report without changing the Remote ID, move 255 to this field.

XNCMPDND
XNCMPDUS
	CHANGE	`10 RAADEXIT-COMP-DNOD PIC X(8).`
		`10 RAADEXIT-COMP-DUSR PIC X(8).`
		Destination Node and Destination User are only referenced if alter is specified above.

EXABNRM	CHANGE	`05 RAADEXIT-ABNORMAL-COMPLETION.` Abnormal Termination. Fields within Abnormal Termination are processed the same as those for Normal Completion.

Report Information

Assembler Label	Field Type	COBOL and Description
EXJNAM	INFO	`10 RAADEXIT-JOBNAME PIC X(8).` Job Name. In VM, a 12-character job name is possible. RAAD, however, only supports the first eight characters.

Assembler Label	Field Type	COBOL and Description
EXFTYP	INFO	`10 RAADEXIT-FILETYPE PIC X(12).` VM only File Type.
EXJNUM	INFO	`10 RAADEXIT-JOBNUMBER PIC S9(4) COMP.` Spooler Job Number.
EXJSFX	INFO	`10 RAADEXIT-SUFFIX PIC X.` POWER only Job Suffix.

EXCLAS
EXDISP
EXPRI
	INFO	`10 RAADEXIT-CLASS PIC X.`
		`10 RAADEXIT-DISP PIC X.`
		`10 RAADEXIT-PRI PIC X.`
		Class, Disposition, and Priority.
		Note: For VM, the Priority is ignored.

EXCC	INFO	`10 RAADEXIT-CPYCNT PIC S9(4) COMP.` Copy Count. **Note:** For VM the Copy Count is ignored.

EX1LIN
EXELIN
	INFO	`10 RAADEXIT-BEGIN-LINE PIC S9(7) COMP.`
		`10 RAADEXIT-END-LINE PIC S9(7) COMP.`
		Beginning and ending line numbers for the report.

EX1PAG
EXEPAG
	INFO	`10 RAADEXIT-BEGIN-PAGE PIC 9(4) COMP.`
		`10 RAADEXIT-END-PAGE PIC 9(4) COMP.`
		Beginning and ending page numbers for the report.
		Note: For VM these numbers are ignored.

EXCRTR
EXOWNR
	INFO	`10 RAADEXIT-CREATOR PIC X(8).`
		`10 RAADEXIT-OWNER PIC X(8).`
		VM Creator and Owner, or Origin Node, and Origin User in other queues.

EXPWD	INFO	`10 RAADEXIT-PASSWD PIC X(8).` POWER Password, field is ignored for other queues.
EXINFO	INFO	`10 RAADEXIT-USRINFO PIC X(18).` POWER User Information, only the first 16 characters of which are meaningful. **Note:** This field is ignored for VM.
EXSYID	INFO	`10 RAADEXIT-SYSID PIC X.` POWER Sysid, is ignored for all other queues.
EXCANC	INFO	`10 RAADEXIT-CANCELCD PIC X.` POWER Cancel Code is ignored for all other queues.

Assembler Label	Field Type	COBOL and Description
EXJSEP	INFO	`10 RAADEXIT-JSEP PIC 9.` Number of Job Separators. **Note:** This field is ignored for VM.
EXREM	INFO	`10 RAADEXIT-REMOTE PIC X.` Remote ID. **Note:** This field is ignored for VM.
EXDATE	INFO	`10 RAADEXIT-CREATEDATE PIC X(8).` Job Creation Date.

EXSTRT
EXENDT
	INFO	`10 RAADEXIT-STARTTIME PIC S9(7) COMP-3.`
		`10 RAADEXIT-ENDTIME PIC S9(7) COMP-3.`
		POWER only Start Time and Ending Time.

EXFORM	INFO	`10 RAADEXIT-FORMSID PIC XXXX.` Forms ID. **Note:** This field is ignored for VM.

EXDEST
ESUSR
	INFO	`10 RAADEXIT-DESTNODE PIC X(8).`
		`10 RAADEXIT-DESTUSER PIC X(8).`
		Destination Node and Destination User.
		
		Note: These fields are ignored for VM.

EXGRP	INFO	`10 RAADEXIT-GROUP PIC X(8).` Group Name for ARC and RAD queues. This field is ignored for all other queues.

Printer Information

Assembler Label	Field Type	COBOL and Description
EXPRTID	INFO	`15 RAADEXIT-PRTR-ID PIC XXXX.` RAAD Device ID for this print request.
EXPRTS	CHANGE	`10 RAADEXIT-RESTARTABLE PIC X.` Enter a 'Y' here to indicate that you want this print job to restart in the event of a CICS failure during printing. Otherwise, set to 'N'.
EXPRTMLN	CHANGE	`10 RAADEXIT-PRTR-MAXLN PIC S9(4) COMP.` Maximum Line Length supported by this printer. While you can change this value, it is probably best altered using the Device Definition process described in this manual.

Assembler Label	Field Type	COBOL and Description
EXPRTFCB	CHANGE	`10 RAADEXIT-PRTR-FCB PIC X(8).` FCB Name to use for this report. If field is empty, RAAD uses "$$BFCB00."
EXPRTFF1	CHANGE	`10 RAADEXIT-PRTR-FF1 PIC X.` Yes/No flag for Forms Feed First. See "RAAD Device Definition," page 70, for more information.
EXPRTFFE	CHANGE	`10 RAADEXIT-PRTR-FFL PIC X.` Yes/No flag for Forms Feed Last. See "RAAD Device Definition," page 70, for more information.
EXPRTJSP	CHANGE	`10 RAADEXIT-PRTR-JSP PIC X.` Yes/No flag for JSEPs. See "RAAD Device Definition," page 70, for more information.
EXPRTMNL	CHANGE	`10 RAADEXIT-PRTR-MNL PIC X.` Yes/No flag for Max New Line. See "RAAD Device Definition," page 70, for more information.
EXPRTWRP	CHANGE	`10 RAADEXIT-PRTR-WRP PIC X.` Yes/No flag for Line Wrap. See "RAAD Device Definition," page 70, for more information.
EXPRTALN	CHANGE	`10 RAADEXIT-PRTR-ALN PIC X.` Set to '1' for alignment at channel one and 'T' for alignment to top of form. See "RAAD Device Definition," page 70, for more information.
EXPRTDPL	CHANGE	`10 RAADEXIT-PRTR-DUP PIC X.` Yes/No flag for Duplex Printing. See "RAAD Device Definition," page 70, for more information.
EXPRTPS0	CHANGE	`10 RAADEXIT-PRTR-PS0 PIC X.` Yes/No flag for Print and Space 0. See "RAAD Device Definition," page 70, for more information.
EXPRTVFC	CHANGE	`10 RAADEXIT-PRTR-VCF PIC X.` Yes/No flag for Vertical Forms Control. See "RAAD Device Definition," page 70, for more information.
EXPRTFRM	CHANGE	`10 RAADEXIT-PRTR-FRM PIC X.` Yes/No flag for Forms Control. See "RAAD Device Definition," page 70, for more information.
EXPRTTID	CHANGE	`10 RAADEXIT-TCPIP-SYSID PIC 99.` TCP/IP SysId. See "RAAD Device Definition," page 70, for more information.

Assembler Label	Field Type	COBOL and Description

EXPRTABG
EXPRTAEN
	CHANGE	`10 RAADEXIT-ASCII-BEGIN PIC X.`
		`10 RAADEXIT-ASCII-END PIC X.`
		ASCII Escape Begin and End characters. See "RAAD Device Definition," page 70, for more information.

EXPRTCFM	CHANGE	`10 RAADEXIT-CUR-FORM PIC XXXX.` Current form mounted in the printer. **Note:** Use caution when changing this field.
EXPRTTCP	CHANGE	`10 RAADEXIT-TCPIP-NAME PIC X(32).` TCP/IP Printer name or address. **Note:** Use caution when changing this field.
EXPRTTPT	CHANGE	`10 RAADEXIT-TCPIP-PORT PIC S9(4) COMP.` TCP/IP Port.
EXPRTTQU	CHANGE	`10 RAADEXIT-TCPIP-QUE PIC X(40),` TCP/IP Queue name.
EXPRTTRT	CHANGE	`10 RAADEXIT-TRANTBL PIC X(8).` Translate table for this printing task. If empty, RAAD uses its "STANDARD" table. See "Printer Translate Table," page 170.
EXPRTEXT	CHANGE	`10 RAADEXIT-PRTR-EXIT PIC X(8).` This is the name of your program. This information is for your use only. Changing this value make no difference to the application.

EXPRTSPI
EXPRTSLN
EXPRTSPT
	CHANGE	`10 RAADEXIT-INIT-STRING PIC X(128).`
		`10 RAADEXIT-LINE-STRING PIC X(64).`
		`10 RAADEXIT-TERM-STRING PIC X(128).`
		The strings, as entered in the RAAD Device Definition screen, page 70. If these strings are correct, you do not need to add new ones. Strings are discussed in more detail in "Printer Control and String Processing," page 171.

EXINITW
EXTERMW
	CHANGE	`05 RAADEXIT-INIT-WORK PIC X(1024).`
		`05 RAADEXIT-TERM-WORK PIC X(1024).`
		RAAD supplies two large work areas for you to build Initialization and Termination strings. If you do create strings here, you must be sure to set the length fields described above in order for the contents of these strings to be used. Strings are discussed in more detail in "Printer Control and String Processing," page 171.

Printer Translate Table

A Printer Translate table is 256 bytes long and is of the form required by the 370 Translate instruction (TR). The Standard Table is shown.

```
STANDARD CSECT
*                0 1 2 3 4 5 6 7 8 9 A B C D E F
         DC   X'40010203040506070809 0A0B0C0D0E0F'  0-
         DC   X'10111213141516171819 1A1B1C1D1E1F'  1-
         DC   X'20212223242526272829 2A2B2C2D2E2F'  2-
         DC   X'30313233343536373839 3A3B3C3D3E3F'  3-
         DC   X'40414243444546474849 4A4B4C4D4E4F'  4-
         DC   X'50515253545556575859 5A5B5C5D5E5F'  5-
         DC   X'60616263646566676869 6A6B6C6D6E6F'  6-
         DC   X'70717273747576777879 7A7B7C7D7E7F'  7-
         DC   X'80818283848586878889 8A8B8C8D8E8F'  8-
         DC   X'90919293949596979899 9A9B9C9D9E9F'  9-
         DC   X'A0A1A2A3A4A5A6A7A8A9AAABACADAEAF'  A-
         DC   X'B0B1B2B3B4B5B6B7B8B9BABBBCBDBEBF'  B-
         DC   X'C0C1C2C3C4C5C6C7C8C9CACBCCCDCECF'  C-
         DC   X'D0D1D2D3D4D5D6D7D8D9DADBDCDDDEDF'  D-
         DC   X'E0E1E2E3E4E5E6E7E8E9EAEBECEDEEEF'  E-
         DC   X'F0F1F2F3F4F5F6F7F8F9FAFBFCFDFE40'  F-
*
         END
```

The Standard Table preserves all hexadecimal values except for X’00’ and X’FF’ which are translated to spaces (X’40’).

To generate a new translate table simply create a 256 byte table similar to that shown above, incorporating your changes into it. Then assemble the phase and catalog it to a library that is accessed by the CICS running RAAD. Finally, enter the phase name of this table into the “Translate Table” field in the relevant Device Definitions using the RAAD transaction.

Note: There is no phase named “STANDARD.” The RAAD Standard Translate Table is hard-coded within RAAD itself. If you need to change the table for all Printers then you have to add it to all Device Definitions in RAAD.

Printer Control and String Processing

The following steps provide the sequence of events that occur during the printing of a report and show how and when the various printer exits and strings are used:

1. A report print task is started on a CICS printer.
2. RAAD calls any User Exit specified in the Device Definition. If the Exit provides an initialization string, it is placed into the output buffer. If the Exit does not provide an initialization string but one was specified in the Device Definition, then it is placed in the printer buffer. If the Exit changed any of the Printer Options, these are used to print the report.
3. If this printer is defined as an SCS printer to CICS, the forms length and lines per inch control sequences are placed into the printer output buffer.
4. If this printer is defined with FRMFEED=1ST, a forms eject is performed.
5. If the JSEP Operand is specified, the report starting job separator page is generated, and a forms eject is performed.
6. The report lines are printed until completed or stopped. Each report line is prefixed by the Line String as specified in the Device Definition.
7. If the JSEP Operand is specified, a forms eject is performed and the report ending job separator page is generated.
8. If the Exit specified a Termination String, it is placed into the output buffer. If the Exit did not specify a Termination String and a Termination String was given in the Device Definition, it is placed into the output buffer.
9. If this printer is defined with FRMFEED=LAST, a forms eject is performed.

The process shown above is followed for both printers attached to CICS and TCP/IP printers. There is no exit facility available for RAAD writers.

RAAD Security Exits

Three security exit points were added to this release of RAAD: Queue, Printer and Command authorization. These exit points can be enabled or disabled by individual users. Some users may go through the additional security provided by the exit, some may not.

The user written exit program must be a CICS Command Level program and can be written in any language. RAAD issues an EXEC CICS LINK to this program, providing you with relevant data in the associated COMMAREA.

Exit Point	Description
Queue Access	This exit point is entered for every line that is about to be displayed on the RAAD Queue Display. The exit can respond with one of the following: 1. Allow the user to see this line 2. Reject this individual line 3. Reject this line and all lines following it 4. Accept this line and all lines following it
Printer Selection	This exit point is entered whenever the user attempts to modify the contents of the "Printer" field on the RAAD Queue Display. The exit can either allow or reject the user's selection.
Command Authorization	This exit point is entered whenever the user attempts one of the line commands on the RAAD Queue Display. The exit can either allow or reject the user's selection.

Use of the security exits is optional and is established in the User Profile for each individual user. See "RAAD User Profile Definition," page 26.

Assembler Label	COBOL Label and Description
ESSHDR	`RAADSECUR-HEADER PIC X(8).` Constant "CSIRAA40."
ESSXPT	`RAADSECUR-EXIT-TYPE PIC X.` • Q—Queue Display Line Item Authorization • P—Printer Authorization • C—Line Command Authorization.
ESSANS	`RAADSECUR-ANSWER PIC X.` • R—Reject this request • X—Reject all requests from now on • space—Accept this request • A—Accept all requests from now on.

Assembler Label	COBOL Label and Description
ESSUSR	RAADSECUR-USERID PIC X(16). RAAD User ID for this session.
ESSQUE	RAADSECUR-QUEUE P{IC XXX. Queue for this request.
ESSPRT	RAADSECUR-PRINTER PIC X(4). Printer ID. This is only available on type = 'P'.
ESSCMD	RAADSECUR-COMMAND PIC X. Line item command. This is only available for type = 'C'.
ESJNAM	RAADSECUR-JOBNAME PIC X(8). Spooler Queue Job Name.
ESFTYP	RAADESCUR-FILETYPE PIC X(12) VM File Type.
ESJNUM	RAADSECUR-JUBNUMBER PIC S9(4) COMP. Spooler Queue Job Number
ESJSFX	RAADSECUR-SUFFIX PIC X. POWER/VSE Job Suffix.
ESCLAS	RAADSECUR-CLASS PIC X. Spooler Job Class.
ESDISP	RAADSECUR-DISP PIC X. POWER/VSE Disposition.
ESPRI	RAADSECUR-PRIORITY PIC X. POWER/VSE Priority.
ESCRTR	RAADSECUR-CREATOR PIC X(8). VM Job Creator or POWER/VSE Origin Node.
ESOWNR	RAADSECUR-OWNER PIC X(8). VM Job Owner or POWER/VSE Origin User.
ESPWD	RAADSECUR-PASSWORD PIC X(8). POWER/VSE Password, if present.
ESINFO	RAADSECUR-USERINFO PIC X(16). POWER/VSE User Information.
ESSYID	RAADSECUR-SYSID PIC X. POWER/VSE SYS ID.
ESREM	RAADSECUR-REMOTE PIC X. POWER/VSE Remote ID (one byte binary data).
ESDEST	RAADSECUR-DESTNODE PIC X(8). POWER/VSE Destination Node.

Assembler Label	COBOL Label and Description
ESUSR	RAADSECUR-DESTUSER PIC X(8). POWER/VSE Destination User

RAAD enters the Queue Display Authorization Exit point (‘Q’) when RAAD is formatting the Queue Display. The exit is entered for each line on the Queue Display.

RAAD enters the Printer Exit point (‘P’) whenever the user attempts to change the Printer ID on the RAAD Queue Display.

RAAD enters the Line Command Exit point (‘C’) whenever the user attempts a command on one of the lines shown on the Queue Display.

Spooler Queue information, Job Name and Number, for example, is provided for exit types ‘Q’ and ‘C’.

RAAD retrieves the Exit point values from the user written exit program through an EXEC CICS LINK to the program.

In each case, you can accept or reject the individual request. In addition, for the Queue Display Authorization Exit (‘Q’), you can specify two additional responses:

- A—Accept everything from now on, or
- X—Reject this line and all other lines from now on.

These two additional responses were added for the sake of efficiency.

Two copy books are provided for your use with this exit:

- A.RAADSECA—Assembler
- C.RAADSECA—COBOL.

CSIRAAD-External Interface to the Queue and View Displays

If you have your own menu program, you can access the RAAD Queue Display and/or the RAAD View Display Directly using the External Interface. Access to the Queue Display and View Display uses the same parameter area. Two Copy books are available for this parameter area:

- RAADEXTA—BAL (Assembler) Parameter Area
- RAADEXTC— COBOL Parameter Area.

External Interface Parameter Area

The first part of the Parameter Area is common to both the Queue and View Displays. This part of the Parameter Area must be filled in completely. All fields are required.

Assembler Label	COBOL and Description
EXRADHDR	`05 RAADEXT-HEADER PIC X(8) VALUE SPACES.` Identifies the External Interface. Must be either: • "CSIRAA40"—External Interface to Queue Display • "CSIRAA41"—External Interface to View Display
EXP2RETN	`05 RAADEXT-RETURN` When either the Queue Display or the View Display is finished, it will XCTL to the program you specify below (EXP2RPM or RAADEXT-RETURNTO), passing a 64-byte COMMAREA that contains the information you placed here. This is discussed in more detail in the section "Using the External Interface."
EXP2HD	`10 RAADEXT-HEADER2 PIC X(8).` Identifies the External Interface. Must be either: • "CSIRAA40"—External Interface to Queue Display • "CSIRAA41"—External Interface to View Display **Note:** These values must be in both places.
EXP2USR	`10 RAADEXT-USERID PIC X(16).` Must be a valid RAAD User ID, left justified and space filled.
EXP2RPGM	`10 RAADEXT-RETURNTO PIC X(8).` The name of the CICS program that RAAD will XCTL to when either the Queue Display or View Display is terminated. This is discussed in more detail in the section "Using the External Interface."

Assembler Label	COBOL and Description
EXP2DATA	10 RAADEXT-SAVE32 PIC X(32) VALUE LOW-VALUES. This is a 32-byte area that you can use to store identifying information you will need to resume your task after the RAAD Queue Display or View Display processing is complete. Its contents are entirely up to you. RAAD merely preserves this field and returns it to you when processing is complete.
EXP2QUE	05 RAADEXT-QUEUE PIC XXX. Put the RAAD queue you wish to process here.

For external access to the RAAD Queue Display, use the following parameters:

Assembler Label	COBOL and Description
EXCLS	10 RAADRA40-CLASS PIC X OCCURS 4 TIMES. You can place up to four different classes here. You can also use the RAAD reserved word “ALL” for all classes. If omitted, the default classes defined for the User ID specified above is used.
EXNAM	10 RAADRA40-NAME PIC X(8) OCCURS 4 TIMES. You can place up to four different job names here. All, some, or none of the job names can be generic. If omitted, all jobs are displayed.
EXGRP	10 RAADRA40-GROUP PIC X(8) OCCURS 4 TIMES. You can place up to four different group names here when accessing either the ARC or RAAD queues. This field is ignored for all other queues. These can be generic group names.
EXREM	10 RAADRA40-REMOTE PIC 999 OCCURS 4 TIMES. You can place up to four different remote IDs here. The remote IDs cannot be generic.
EXOND	10 RAADRA40-ORIGNODE PIC X(8) OCCURS 4 TIMES. You can place up to four different origin nodes here. In VM, this is the VM Creator field. These can be generic if necessary.
EXOUS	10 RAADRA40-ORIGUSER PIC X(8) OCCURS 4 TIMES. You can place up to four different origin users here. In VM, this is the VM Owner field. These can be generic if needed.
EXDND	10 RAADRA40-DESTNODE PIC X(8) OCCURS 4 TIMES. You can place up to four different destination nodes here. These can be generic if required.
EXDUS	10 RAADRA40-DESTUSER PIC X(8) OCCURS 4 TIMES. You can place up to four different destination users here. These can be generic.

Assembler Label	COBOL and Description
EXUIN	10 RAADRA40-USERINFO PIC X(16) OCCURS 4 TIMES. You can place up to four different POWER User Info fields here. These can be generic.

For external access to the RAAD View Display, use these parameters

Note: These fields cannot be generic:

Assembler Label	COBOL and Description
EXJNAM	10 RAADRA41-JOBNAME PIC X(8). The Job Name of the report you wish to view.
EXFTYP	10 RAADRA41-FILETYPE PIC X(12). The VM File Type of the report you want to view. This field is ignored for queues other than VM.
EXJNUM	10 RAADRA41-JOBNUMBER PIC S9(4) COMP. The Spooler Job Number is placed here if you know it. If you do not know the Spooler Job Number, set the field to ZERO.
EXJSFX	10 RAADRA41-SUFFIX PIC X. This is the POWER Job Suffix for segmented reports. It is ignored for all queues other than POWER. This field is a one-byte binary value.
EXCLAS	10 RAADRA41-CLASS PIC X. The Job Class.
EXDISP	10 RAADRA41-DISP PIC X. The Job Disposition, H, D, L , or K.
EXPRI	10 RAADRA41-PRIORITY PIC 9. The Job Priority. This field is ignored for VM.
EXCRTR	10 RAADRA41-CREATOR PIC X(8). The VM Creator or POWER Origin Node.
EXOWNR	10 RAADRA41-OWNER PIC X(8). The VM Owner or POWER Origin User.
EXPWD	10 RAADRA41-PASSWORD PIC X(8). The POWER Password for this report. This field is ignored for non-POWER queues.
EXINFO	10 RAADRA41-USERINFO PIC X(18). The POWER User Information field from the * $$ LST USER= statement. Only the first 16 bytes are used by the View Display.

Assembler Label	COBOL and Description
EXSYID	10 RAADRA41-SYSID PIC 9. The POWER SysId for the report. This Field is ignored for VM.
EXREM	10 RAADRA41-REMOTE PIC X. The POWER Remote ID for the report. This field is a one-byte binary value. Put HIGH-VALUES (X'FF') here to cause the View Display to ignore this field.
EXDEST	10 RAADRA41-DESTNODE PIC X(8). The POWER Destination Node. This field is ignored for VM access.
EXUSR	10 RAADRA41-DESTUSER PIC X(8). The POWER Destination User. This field is ignored for VM access.
EXDESC	10 RAADRA41-FILLER PIC X(88). **Note:** This field must be set to LOW-VALUES (binary zeroes) or unpredictable results will occur.

Using the External Interface

First, ensure that the Parameter Area has been set to LOW-VALUES (binary zeroes). Next, set up the parameter list, discussed in more detail below, and issue the following CICS command level call. The code is below in COBOL:

```
EXEC  CICS XCTL                                ,
      PROGRAM ('CSIRAA40'  -or- 'CSIRAA41')    ,
      COMMAREA (RAAD-EXTERNAL)                 ,
      LENGTH  (508         -or- 449)           .
```

Note: COMMAREA length must be set to 508 for CSIRAA40 and 449 for CSIRAA41.

RAAD takes over the terminal session. When the RAAD processing is complete, it issues a CICS command level call similar to that shown below:

```
EXEC  CICS XCTL                              ,
      PROGRAM (RAADEXT-RETURNTO)             ,
      COMMAREA (RAADEXT-RETURN)              ,
      LENGTH  (64)                           .
```

The 64 bytes you receive back from RAAD will be the same as those you sent to RAAD in the Parameter Area. The rest of the Parameter Area is not preserved.

Within the 64 byte area the RAAD returns to you is a 32 byte area (RAADEXT-SAVE32 or EXP2DATA) which is specifically intended as a save area for your program's use. If 32 bytes is insufficient, it is large enough to hold a CICS Temporary Storage Queue name where you can store data you need for your own purposes.

Externally Accessing the RAAD Queue Display

All fields in the Queue Display specific portion of the Parameter Area are optional. If omitted, set the fields to LOW-VALUES (binary zeroes), with the exception of the remote ID (EXREM) which you must set to HIGH-VALUES (x'FF'). The more fields you supply, the more restrictive the resulting Queue Display will be.

When entering multiple values, such as two or more Job Names, fill in the array from left to right. The RAAD Queue Display will stop looking at the array when it finds a non-significant value in the array.

Any of the RAAD queues can be used when accessing the RAAD Queue Display. However, you must be aware that the edits redistricting users to specific queues as specified in the User Profile (see page 26) are not enforced through the External Interface.

No validity checking is performed in this interface. As a result, if bad data is passed to the RAAD Queue Display, unpredictable results will occur. Use CEDF to verify that your COMMAREA is correct.

Externally Accessing the RAAD View Display

Note: This interface will not work for the RAD, ARC, or SPL queues. Attempting to use one of these queues will result in unpredictable results.

At a minimum, you must supply at least the job name (RAADRA41-JOBNAME or EXJNAM). Failure to do so will result in unpredictable results. The more additional information you are able to supply, the more likely it is that RAAD will find the report you want.

Supply the Job Number (RAADRA41-JOBNUMBER or EXJNUM) to ensure a positive match, if it is available to you. If the Job Number is not available, attempt to be as explicit as possible with the remaining fields.

The View Display presents the first report it finds that matches the criteria you have supplied in the Exit Parameter Area. This may or may not be the report you actually want. For instance, suppose we are looking for job "CSIRAA41" and the POWER LST Queue contains three of them:

```
Name       Nbr   Class Disp Pri
-------   -----  ----- ---- ---
CSIRAA41  23456    L    D    3
CSIRAA41  23678    N    H    2
CSIRAA41  29865    N    H    2
```

Specifying the Job Name of CSIRAA41 without further restrictions will always yield the first entry in the list above, job number 23456. If you also include class 'N', then the View Display will show the second one, job number 23678. Unless you can also supply the job number or there is something else in the queue that uniquely identifies it, the third job, job number 29865, will not be reachable through this interface. In this case, you will have to use the Queue Display, instead, to get to the desired report.

No validity checking is performed in this interface. As a result, if bad data is passed to the RAAD View Display, unpredictable results will occur. Use CEDF to verify that your COMMAREA is correct.

Generating FCBs

If your system has a printer that uses FCBs (forms control buffers), then you can skip this section, since your system already has FCBs cataloged to your Core Image Library.

Systems with printers that use carriage control tapes (therefore, not requiring FCBs) will need an FCB generated for each form used with this product. Information on coding your own FCB is found in 'DOS/VSE SYSTEM CONTROL STATEMENTS'.

For your convenience, we have provided a macro, BIMFCB, which simplifies this process. The BIMFCB macro has the following format.

```
1.......10....16..20...25...30...35..                    ..72
FCBNAME  BIMFCB TYPE=,                                     X
                LINES=,                                    X
                LPI=,                                      X
                CHANNEL=,                                  X
                POS=
```

Where:

- FCBNAME— is the FCB phase name
- TYPE—can be INITIAL, FINAL, or omitted
- LINES—indicates the page length
- LPI—indicates lines per inch-either 6 or 8
- CHANNEL—indicates channel 1 thru 12
- POS—indicates lines 1 thru 255

Sample FCB

Below is a sample FCB with the following characteristics:

- FCB name is 'FCB001'
- 66 lines per page , 6 lines per inch
- Channel 1 is on line 1
- Channel 2 is on lines 12 and 16
- Channel 12 is on line 56

```
1.......10....16..20...25...30...35...40              ..72
FCB001   BIMFCB TYPE=INITIAL,                           X
               LINES=66,                                X
               LPI=6
         BIMFCB CHANNEL=1,POS=1
         BIMFCB CHANNEL=2,POS=(12,16)
         BIMFCB CHANNEL=12,POS=56
         BIMFCB TYPE=FINAL
         END
```

Notes:

- LINES and LPI can only be used with TYPE=INITIAL.
- CHANNEL and POS must be used together and no other Operand can be specified along with them.
- TYPE=INITIAL must be coded first, TYPE=FINAL must be coded last, before the END card, and the CHANNEL cards must be coded in between.
- A value in POS cannot be greater than LINES.

RAAD Installation

RAAD is shipped on an unlabeled tape or cartridge containing one card-image file. When this tape is loaded into your RDR Queue, there will be one POWER job that will catalog the following modules to your libraries:

- Load/object Library
  - $$BBIMVM—VM Access Transient
  - BIMGETSP—VSE/POWER Queue Access Module
  - BIMGSP00—POWER access control module
  - BIMQCYAD—ARCHIVE I/O Module for Disk
  - BIMQCYAF—ARCHIVE I/O Module for Fiche Tapes
  - BIMQCYAM—Default ARCHIVE I/O Module
  - BIMQCYAT—ARCHIVE I/O Module for Tape
  - BIMQCYEX—Security exit module
  - BIMXPC00—POWER XPCC interface module
  - CSIPRTSP—RAAD SPL Program for BIM-PRINT Users
  - CSIQCOPY—Spool Transfer program
  - CSIRAA00—RAAD Common Module and Subroutines
  - CSIRAA01—RAAD Transaction Director
  - CSIRAA02—RAAD Program Stack
  - CSIRAA03—RAAD System Menu
  - CSIRAA04—RAAD List Display
  - CSIRAA05—RAAD User Profile Definition
  - CSIRAA06—RAAD Power Polling Definition
  - CSIRAA07—RAAD Catalog Definition
  - CSIRAA08—RAAD Report Definition
  - CSIRAA09—RAAD Recipient Definition
  - CSIRAA10—RAAD Output Definition
  - CSIRAA11—RAAD Device Definition
  - CSIRAA12—RAAD Format Definition
  - CSIRAA13—RAAD Report List
  - CSIRAA14—RAAD Control Printers Display
  - CSIRAA15—RAAD System Status
  - CSIRAA16—RAAD System Configuration
  - CSIRAA17—RAAD Full Screen Editor
  - CSIRAA25—RAAD Field Definition
  - CSIRAA26—RAAD Selection Definitions
  - CSIRAA30—RAAD External Device Writer
  - CSIRAA31—RAAD Write To RAD Queue
  - CSIRAA33—RAAD Generate QCOPY Parms
  - CSIRAA35—RAAD DOC queue display
  - CSIRAA40—RAAD Queue Display
  - CSIRAA41—RAAD View Display

- CSIRAA42—RAAD Printing Program
- CSIRAA43—RAAD TCP/IP Printing
- CSIRAA44—RAAD Writer Program
- CSIRAA45—RAAD Dispatch Program
- CSIRAA46—RAAD Completion Processing
- CSIRAA47—RAAD PDF Writer
- CSIRAA70—RAAD Direct Write
- CSIRAA71—RAAD Logging
- CSIRAA72—RAAD Access Module
- CSIRAA73—RAAD Utility Program
- CSIRAA74—RAAD Formatting Program
- CSIRAA75—RAAD Help Display
- CSIRAA76—RAAD Tree View
- CSIRAA77—RAAD DOC Queue Access
- CSIRAA90—RAAD Power Polling
- CSIRAA91—RAAD Cross Partition Module
- CSIRAA92—RAAD Daily Processes
- CSIRAA93—RAAD QCOPY Job Submission
- CSIRAA94—RAAD Reports
- CSIRAA99—RAAD System Start and Stop
- CSIRAACG—RAAD HTML Handler
- CSIRAAD —RAAD Batch Program
- CSIRAAM —RAAD 3270 Screen Handler
- CSIRAASA—RAAD Security Authorization
- CSIRAASP—RAAD SPL Program

- Source Library
  - BIMFCB.A—Sample FCB Source Code and JCL
  - BIMFCB.E—FCB Generation Macro
  - BIMIOGEN.E—I/O Module Customization Macro
  - BIMQCYAD.A—ARCHIVE I/O Module for Disk
  - BIMQCYAF.A—ARCHIVE I/O Module for Fiche Tapes
  - BIMQCYAM.A—Default ARCHIVE I/O Module
  - BIMQCYAT.A—ARCHIVE I/O Module for Tape
  - BIMQCYDA.A—Record description for ARCHIVE file (BAL)
  - BIMQCYDA.C—Record description for ARCHIVE file (COBOL)
  - BIMQCYEX.A—Sample Security exit (BAL)
  - BIMQCYEX.C—Sample Security exit (COBOL)
  - BIMQCYIX.A—Sample INSERT Operand exit (BAL)
  - BIMVMQ00.A—Macro required for installation step 8d.
  - CSISPLPA.A—RAAD SPL Interface Parameter Area (BAL)
  - CSISPLPC.C—RAAD SPL Interface Parameter Area (COBOL)
  - RAADEXPA.A—RAAD Printer Exit Parameter Area (BAL)

— RAADEXPC.C—RAAD Printer Exit Parameter Area (COBOL)
— RAADEXTA.A—RAAD External Interface Parm Area (BAL)
— RAADEXTC.C—RAAD External Interface Parm Area (COBOL)
— RADCSDUP.A—Sample JCL for Updating the CICS CSD File
— RADVSDEF.A—Sample JCL for Defining RAAD Files

Installation Step 1: Load Distribution Tape

Mount the distribution tape on a tape drive and enter the following VSE/POWER command on the console:

```
S RDR,cuu
```

where *cuu* is the address of the tape drive.

Installation Step 2: Release Install Job

Alter the POWER job (CSIRAAD) that was loaded in the RDR Queue to run in a partition that has labels established for link editing.

```
A RDR,CSIRAAD,DISP=D,CLASS=?
```

Installation Step 3: Supply LIBDEF

When job CSIRAAD starts up, it will pause allowing you to enter a "// SETPARM" statement for the library.sublibrary that you want to contain RAAD.

```
*     // SETPARM SUBLIB='LIB?.SUBLIB?'
*
// PAUSE   ENTER ABOVE SETPARM AS REQUIRED
```

When the installation job is complete, review the printed output for errors. Problems that may occur during the installation job are:

- Your library is full.
- The SETPARM statement was omitted or improperly declared.
- Install job was run in a partition not set up for Link Editing.

Installation Step 4: Define VSAM Files

RAAD requires four VSAM Files:

Name	Description	Space Requirements
RAADFIL	RAAD System File	Space for 1000 records is sufficient for most installations. If you have a number of users or printers or intend to make extensive use of the online QCOPY component of RAAD, then allocate additional space.
RAADCFL	RAAD Catalog File	You need one record for each report you store on RAAD plus 10% extra for the SPL Queue and miscellaneous RAAD generated reports.
RAADDFL	RAAD Data File	As a rule, one 4k record holds about 1 1/2 pages of report information.
RAADTFL	RAAD Temporary File	RECORDS (200 100)— This amount of space is sufficient for most installations. If you are doing an extensive amount of printing to TCP/IP printers, increase this size.

Space requirements above are estimates.

Define the files using the following jobstream as a guide. This jobstream is provided in source member RADVSDEF.A:

```
* $$ JOB JNM=RAADVSAM,CLASS=W,DISP=D
* $$ LST CLASS=L
// JOB RAADVSAM
// DLBL IJSYSUC,'BIM.USER.CATALOG',,VSAM
// DLBL RAADFIL,'RAAD.CONTROL.FILE',,VSAM
// DLBL RAADCFL,'RAAD.CATALOG.FILE',,VSAM
// DLBL RAADDFL,'RAAD.DATA.FILE',,VSAM
// DLBL RAADTFL,'RAAD.TEMP.FILE',,VSAM
// EXEC   PGM=IDCAMS,SIZE=IDCAMS
   DELETE (RAAD.CATALOG.FILE) PURGE CLUSTER
   DEFINE CLUSTER ( -
              NAME(RAAD.CATALOG.FILE) -
             RECORDSIZE(138 1512) -
              SHR(2  )            -
              KEYS(128 0)         -
             VOLUMES(DSK340) -
             NOREUSE -
             FREESPACE(15 10) -
             SPEED -
```

```
            RECORDS(200 100)          -
                ) -
        DATA    ( -
            NAME(RAAD.CATALOG.DATA) -
            CISZ(4096)              -
                 ) -
         INDEX   ( -
             NAME(RAAD.CATALOG.INDEX) -
                 )
DELETE (RAAD.DATA.FILE) PURGE CLUSTER
DEFINE CLUSTER ( -
            NAME(RAAD.DATA.FILE) -
            RECORDSIZE(4088 4088) -
            SHR(2  )            -
            KEYS(16 0)          -
            VOLUMES(DSK340) -
            NOREUSE -
            FREESPACE(15 10) -
            SPEED -
            RECORDS(500 100)          -
                ) -
        DATA    ( -
            NAME(RAAD.DATA.DATA) -
            CISZ(4096)              -
                ) -
         INDEX   ( -
             NAME(RAAD.DATA.INDEX) -
                 )
DELETE (RAAD.TEMP.FILE) PURGE CLUSTER
DEFINE CLUSTER ( -
            NAME(RAAD.TEMP.FILE) -
            RECORDSIZE(4088 4088) -
            SHR(2  )            -
            KEYS(16 0)          -
            VOLUMES(DSK340) -
            NOREUSE -
            FREESPACE(15 10) -
            SPEED -
            RECORDS(200 100)          -
                ) -
        DATA    ( -
            NAME(RAAD.TEMP.DATA) -
            CISZ(2048)              -
                 ) -
         INDEX   ( -
             NAME(RAAD.TEMP.INDEX) -
                 )
```

```
    DELETE (RAAD.CONTROL.FILE) PURGE CLUSTER
               DEFINE CLUSTER ( -
                NAME(RAAD.CONTROL.FILE) -
                RECORDSIZE(180 700) -
                SHR(2  )            -
                KEYS(24 0)          -
                VOLUMES(DSK340) -
                NOREUSE -
                FREESPACE(15 10) -
                SPEED -
                RECORDS(500 100)           -
                    ) -
              DATA    ( -
                NAME(RAAD.CONTROL.DATA) -
                CISZ(8192)              -
                     ) -
               INDEX   ( -
                 NAME(RAAD.CONTROL.INDEX) -
                     )
/*
/&
* $$ EOJ
```

Installation Step 5: Initialize the RAAD files

Run the RAAD Batch Utility program, CSIRAAD, to initialize your files using the sample JCL below as a guide.

```
* $$ JOB JNM=RAADINIT,CLASS=W,DISP=D
* $$ LST CLASS=L
// JOB RAADINIT
// OPTION LOG
/* DLBL IJSYSUC,'BIM.USER.CATALOG',,VSAM
// DLBL RAADFIL,'RAAD.CONTROL.FILE',,VSAM,CAT=BIMUCAT
// DLBL RAADCFL,'RAAD.CATALOG.FILE',,VSAM,CAT=BIMUCAT
// DLBL RAADDFL,'RAAD.DATA.FILE',,VSAM,CAT=BIMUCAT
// DLBL RAADTFL,'RAAD.TEMP.FILE',,VSAM,CAT=BIMUCAT
// LIBDEF *,SEARCH=(...)
// EXEC CSIRAAD,SIZE=AUTO
     SYSTEM PASSWORD($SYS)        -
          CATALOGFILE(RAADCFL)    -
             DATAFILE(RAADDFL)    -
                 TEMP(RAADTFL)    -
          INITIALIZE
/*
/&
* $$ EOJ
```

Installation Step 6: CICS/VS Table Additions

CICS definitions for RAAD are supplied in RDO format only. A sample jobstream, RADCSDUP.A, is provided for your use.

```
DEFINE PROG(BIMGETSP) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIHFLIB) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIPRTSP) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA00) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA01) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA02) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA03) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA04) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA05) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA06) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA07) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA08) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA09) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA10) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA11) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA12) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA13) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA14) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA15) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA16) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA17) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA18) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA19) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA20) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA25) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA26) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA30) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA31) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA33) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA35) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA40) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA41) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA42) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA43) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA44) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA45) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA46) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA47) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA70) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA71) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA72) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA73) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA74) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA75) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA76) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA77) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA90) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA91) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA92) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA93) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA94) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAA99) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAACG) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAAM)  GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAASA) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(CSIRAASP) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE PROG(IPNAPDFM) GROUP(RAAD) LANG(A) EXECKEY(CICS)
DEFINE TRANS(RAAA)    GROUP(RAAD) PROG(CSIRAA90) TASKDATAKEY(CICS)
DEFINE TRANS(RAAD)    GROUP(RAAD) PROG(CSIRAA01) TASKDATAKEY(CICS)
DEFINE TRANS(RAAF)    GROUP(RAAD) PROG(CSIRAA47) TASKDATAKEY(CICS)
DEFINE TRANS(RAAL)    GROUP(RAAD) PROG(CSIRAA91) TASKDATAKEY(CICS)
```

```
DEFINE TRANS(RAAP)    GROUP(RAAD) PROG(CSIRAA42) TASKDATAKEY(CICS)
DEFINE TRANS(RAAQ)    GROUP(RAAD) PROG(CSIRAA93) TASKDATAKEY(CICS)
DEFINE TRANS(RAAR)    GROUP(RAAD) PROG(CSIRAA92) TASKDATAKEY(CICS)
DEFINE TRANS(RAAS)    GROUP(RAAD) PROG(CSIRAA30) TASKDATAKEY(CICS)
DEFINE FILE(RAADFIL)  GROUP(RAAD) STR(3)
            ADD(YES) BROWSE(YES) DELETE(YES) READ(YES) UPDATE(YES)
DEFINE FILE(RAADCFL)  GROUP(RAAD) STR(3)
            ADD(YES) BROWSE(YES) DELETE(YES) READ(YES) UPDATE(YES)
DEFINE FILE(RAADDFL)  GROUP(RAAD) STR(3)
            ADD(YES) BROWSE(YES) DELETE(YES) READ(YES) UPDATE(YES)
DEFINE FILE(RAADTFL)  GROUP(RAAD) STR(3)
            ADD(YES) BROWSE(YES) DELETE(YES) READ(YES) UPDATE(YES)
```

Programs, Transactions, and Files are named according to RAAD specifications. If these names conflict with existing systems, the RAAD system can be renamed according to the following rule:

Program Names are constructed of three parts XXX YYY NN

Where

- *XXX* is simply a prefix and can be any three characters
- *YYY* must match the first three characters of the transaction
- *NN* must be preserved

If, for example, you wish to rename the Transactions to RDSA, RDSD, and so on, then you must rename all programs to "*xxx*RDS*nn*" as well as all transactions to "RDS*n*."

Renaming the Files can be a bit trickier. In step 5, you initialized the RAAD file. There you can specify the name for the Catalog, Data, and Temporary Files. Changing the name of the Control File requires a patch. Contact CSI Technical Support for assistance.

Installation Step 7: BIM-TMAN Setup

Skip this step if you will not be using BIM-TMAN for RAAD.

Add the following definitions to your BIM-TMAN DEFINE command:

```
 FILE(RAADFIL,U,3,KS)    -
 FILE(RAADDFL,U,3,KS)    -
 FILE(RAADTFL,U,3,KS)    -
 FILE(RAADCFL,U,3,KS)    -
 TRAN(RAAA,CSIRAA90,'RAAD Spooler Polling',NODISP,1)     -
 TRAN(RAAD,CSIRAA01,'RAAD System',DISP,1)                -
 TRAN(RAAL,CSIRAA91,'RAAD Cross Partition',NODISP,1)     -
 TRAN(RAAP,CSIRAA42,'RAAD Printing',NODISP,1)            -
 TRAN(RAAQ,CSIRAA93,'RAAD QCOPY Submission',NODISP,1)    -
 TRAN(RAAR,CSIRAA92,'RAAD Daily process',NODISP,1)       -
 TRAN(RAAS,CSIRAA30,'RAAD External Dvc Wrtr',NODISP,1)   -
```

Refer to the BIM-TMAN documentation for details of these operands.

Unlike CICS, BIM-TMAN does not require programs to be predefined to it such as CICS PPT entries. You can ignore any reference in this manual to program definitions if you are only using BIM-TMAN.

The FILE operand has the following format:

```
FILE(name,access,strno,type)
```

Where:

- name—DLBL name of the VSAM dataset
- access—dataset access type
  - I = input only (default)
  - U = update
  - L = load mode
- strno—VSAM number of strings (default is 3)
- type—VSAM cluster type
  - KS = Keyed Sequence
  - ES = Entry Sequence
  - RR = Relative Record

BIM-TMAN also requires that DLBLs be present for all VSAM datasets to be accessed and that all programs be available in LIBDEF search chains.

Installation Step 8: VM Access Support for RAAD.

Note: Installation steps 8a through 8d are only required if you want VM Spool Queue access support to be included in RAAD.

The VM support in RAAD requires the use of “real storage” in your CICS or BIM-TMAN partition. RAAD requires 8k of real storage to activate the interface to VM and additional 4k of real storage for each concurrent access to a VM Queue from a RAAD user or printer task.

The VM/SP System Owned Volumes, as defined in the DMKSYS assembly, must be present in all VSE machines that will run RAAD. This requires additional MDISK statements in the VM/SP directory for the VSE guest machine(s), and ADD statements in the VSE IPL procedure(s). The following installation steps cover these additions.

Installation Step 8a: VM/SP Directory

The following conditions must be met in the VM directory of every virtual machine that will run RAAD:

- The virtual machine must have privilege classes “C” and “D,” or “D” and “E.”
- You must provide access to all CP owned DASD volumes. This can be accomplished in one of two ways:

- LINK MAINT xxx AS cuu RR—This assumes that your MAINT user has access to the CP owned volumes as "full-pack" MDISKs. This is IBM's recommended method of handling CP owned disks.
  - — *xxx* is MAINT's virtual disk address.
  - — *cuu* is the virtual disk address for the guest machine.
- MDISK cuu dvctype strtcyl endcyl volid—You can code your own MDISK statement for each CP-owned volume. This is not the recommended method because it requires duplicate MDISK statements in the VM Directory, one for MAINT and one for the VSE guest machine.

Installation Step 8b: VSE ASI Procedure

This step must be performed for each VSE guest machine that needs to run RAAD.

For each VM/SP System Owned Volume, you must have a corresponding ADD statement in your VSE IPL procedure (ASIPROC). The *cuu* given in the ADD statement must match the virtual *cuu* supplied on the MDISK or LINK MAINT statement supplied in the previous step.

Installation Step 8c: SDL Transient

The VM Spool Queue Access requires a transient, $$BBIMVM. Add this transient to your ASI procedure at the point that it adds phases to the SDL as follows:

```
SET SDL
$$BBIMVM,MOVE  (RAAD VM access interface phase)
```

If you intend to use either the RAAD Help System or the DOC queue, you must also place phase CSIHF00 in the SVA.

```
CSIHF00, SVA
```

Installation Step 8d: VM/ESA Interface Control Table

If you are using VM/ESA, you will need to create a phase containing a list of the VM System Owned Volumes for your VM installation. A Macro has been provided to assist in this process.

Note: This step is ONLY required if you are using VM/ESA.

```
* $$ JOB JNM=BIMVMQ00,CLASS=0
* $$ LST CLASS=Q
// JOB BIMVMQ00
// LIBDEF PHASE,CATALOG=your.lib
// LIBDEF *,SEARCH=your.lib
// OPTION CATAL
PHASE BIMVMQ00,S,NOAUTO,SVA
// EXEC ASSEMBLY,SIZE=400K
         COPY BIMVMQ00
         BIMVMQ00 SYSOWN=(vmsres,vmpk01,...)
```

```
         END
/*
// EXEC LNKEDT
/&
* $$ EOJ
```

Notes:

- Catalog the phase into a library that is available to RAAD at execution.
- The SEARCH LIBDEF must point to the RAAD distribution library.
- The SYSOWN Operand must contain all of the VM System Owned Volumes, in the same sequence that they are specified in the VM System Gen.

Installation Step 9: PC Component of RAAD

PC software is included to assist you in downloading report information from RAAD to your PC.

RAAD PC software is available on the Web in the "Download" area of the BIM website at

www.bimoyle.com

This file will install the RAAD PC software on your PC.

Installation Step 10: RAAD Help File

The RAAD help file requires 4 cylinders of 3390 DASD space or its equivalent. The DLBL and EXTENT for this file must be added to the CICS JCL deck.

The RAAD help installation file is found on the Web at

ftp://bimsrvic.bimoyle.com/download/RAAD/

Download the file named "RAADHELP.ZIP." This file expands to an ASCII text file that you will need to edit using a PC text editor. Notepad or WordPad will edit this file. At the beginning of the file, you will find these statements:

```
/*                 ************************************
/*                 *  RAAD HELP FILE DLBL AND EXTENT *
/*                 ************************************
/*
// DLBL RADHELP,'RAAD.TEST.HELP.FILE',99/365,DA
// EXTENT SYS046,DSK316,1,0,29250,60
// ASSGN SYS046,DISK,VOL=DSK316,SHR
/*
/*
// LIBDEF *,SEARCH=(BIMLIB.T,BIMLIB.P)
```

Modify the DLBL, EXTENT, ASSGN and LIBDEF statements as needed for your environment and upload this file to the POWER RDR queue for execution.

Using the RAAD System Configuration process, supply the DLBL name that was added to CICS for Help and mark the Help System as available.

RAAD First-Time Use

After installation is complete, follow the steps below to complete installation and ready RAAD for use.

1. On a clear screen, enter transaction RAAD.
2. Sign on using User Id = "$SYS", Password = "$SYS"
3. Put the cursor on "User Definition" (2nd column of first line of menu) and press Enter. If you selected "User Definition List," you will se a list containing only the "$SYS" user. Put your cursor there and press Enter.
4. Change the password to something meaningful for you. The "$SYS" password is mentioned throughout this manual. changing the password maintains a high level of security for your system. As you type the password, it will show on the screen.
5. Press PF5 to update the password.

   Note: The only thing you are allowed to change for the "$SYS" user is the password; no other changes will be recognized.

6. Press PF4 to return the RAAD Menu.
7. Move the cursor to "System Status" and press Enter.
8. On the command line for the System Status Display, type in the word "VERIFY" and press Enter. This will take a couple seconds to complete.
9. Press PF4 to return to the RAAD Menu.
10. Move the cursor to the "View Report List" and press Enter.
11. Specify "RAD" for Queue and "$LOG" for group and press Enter.
12. You will see two entries here, RAADSTAT and RAADLOG. Position the cursor on the line for "RAADLOG," enter a 'V' in the command, and press Enter.
13. If installation is correct, you will see three lines in the log:

```
$SYS Signed On
$SYS Updated $SYS record
$SYS Viewed RAADLOG
```

    Any other messages in the log are errors that were detected during the "VERIFY" process, step 8 above. Correct the errors in installation, go back to step 8, and run the "VERIFY" again.

14. Press PF4 to return to the Queue Display. At this time, you can view the RAADSTAT job if you want. It shows additional detail that is useful for CSI Technical Support for problem solving. It is not necessary that you retain this information, so you can delete the report. To delete the report, position the cursor on the line corresponding to "RAADSTAT," enter a 'D' in the

command, and press ENTER. You will notice that the deletion takes place immediately and the "RAADSTAT" job is now gone.

15. Press PF12 to display the RAAD Program Stack. On the resulting display, position the cursor to the line that reads "RAAD Initial Menu" and press ENTER. The system returns you to the RAAD Menu.
16. Move the cursor to the last entry on the display, "System Configuration," and press ENTER.
17. Make sure that the POWER Data File and Queue File DLBL names are correct for your system, and, if not, correct them. It is not necessary to do any further configuration at this time. Press PF5 to update the System configuration.
18. Press PF4 to return to the RAAD Menu.
19. You can now view a report. Move the cursor to "View Report List" and press ENTER.
20. Specify "LST" for the queue, and anything else you want to specify and press ENTER.
21. If the DLBL names are correct and that a proper set of DLBLs and EXTENTs are available to CICS, either in the JCL or in STD Labels, you will see a snapshot of the VSE/POWER LST queue. You can experiment with the LST queue to learn how best to use it.

Before you can begin to make full use of RAAD, additional customization must be performed. This customization can be done in any order.

Existing BIM-PRINT users may want to migrate their BIM-PRINT customization at this time. This process is described in detail in the section "Migrating BIM-PRINT."

Existing BIM-ARCHIVE users can migrate their BIM_ARCHIVE Catalog at this time if they want. However, CSI recommends that BIM-ARCHIVE users wait until they are familiar with RAAD before migrating their BIM-ARCHIVE system to RAAD.

User Profile Definition

You need to establish a User Profile for each user that will have access to RAAD. Individuals can share profiles or each can have a unique profile, as the situation warrants in your environment. The following procedure can be used to create a new User Profile:

- Sign on to RAAD as Administrator (User Id = $SYS),
- Select User Definition List on the Menu
- Choose an existing User Profile that closely matches the profile you want to create and edit it
- Make whatever changes are necessary to the existing User Profile
- Press PF9 to process User Restrictions
- Review the Menu Choices and any additional restrictions that are needed

- Press PF4 to return to the primary screen and ensure that you have supplied an unique User ID and a proper Password
- Either press PF6 to add the record, or key in the “COPY” command on command line. Also, include individual restrictions, if needed.

Repeat theses steps as often as needed to establish profiles for your users.

Device Definition

You will want to establish definitions for your printers. The procedure for this is much the same as listed above for User Profiles:

- Sign on to RAAD as Administrator (User Id = $SYS),
- Select Device Definition List on the Menu,
- Select a Device that is similar to the one you want to define and edit it (initially you can choose any of the RAAD supplied devices),
- Select the Device Type and press ENTER,
- Overtype displayed information with the new data for the printer you are defining,
- Finally, press PF6 to add the record to the file.

Repeat theses steps as often as needed to establish definitions for all your printers.

Catalog Definition

All reports that are stored in the RAAD dataset have an associated Catalog Definition. This is true for reports that are stored in RAAD by the External Device Writer, written to RAAD by CSI-QCOPY, and created using the $RAD Writer or a similar RAAD writer.

Catalog Definitions can be as general or a specific as necessary to accomplish your goals. You will need to do some planning before establishing your Catalog structure. Review the section “RAAD File Structure,” page 11, before defining any RAAD Catalogs.

The procedure for establishing Catalog Definitions is similar to that described above for Device Definitions:

- Sign on to RAAD as Administrator (USER ID = $SYS),
- Select Catalog Definition List on the Menu,
- Select a Catalog that is similar to the one you want to define and edit it,
- Overtype the information with the new data for the Catalog you are defining.
- The default sort sequence for the RAAD Queue Display is Job name, Date, and Time. If you want a different sequence, press PF9 to access the Group Definition and alter the sequence.
- Likewise, if you wish to direct reports associated with this Catalog to a VSAM file other than the default, you need to access the Group Definition.
- When your changes are complete, press PF6 to add the record to the file.

Repeat theses steps as often as needed to establish definitions for your Catalogs.

Spooler Polling

If you want RAAD to periodically poll your spooler queues then you will need to establish one or more Spooler Polling Definitions. RAAD uses these definitions to determine what reports to select and how to process them. The procedure for establishing Spooler Definitions is similar to that described above for Device Definitions.

- Sign on to RAAD as Administrator (USER ID = $SYS),
- Select Spooler Polling List on the Menu (see note below),
- Select an entry that is similar to the one you want to define and edit it,
- Overtype the information with the new data for the Spooler Polling entry you are defining,
- When your changes are complete, press PF6 to add the record to the file.

Repeat theses steps as often as needed to establish all needed definitions for Spooler Polling.

Note: RAAD initially supplies Catalog, User Profile, and Device Definitions during installation. Other lists are empty on initial use. When the RAAD menu encounters an empty list, it immediately proceeds to the detail editor for that menu entry, presenting you with a blank edit screen. If you are ready to create a definition, you can do this now. If on the other hand, you are not yet ready to define an entry, do not use PF4 (RETURN) to go back to the menu. RAAD will notice that there are no entries in the list and proceed right back to the detail editor. Instead, press PF3 to exit RAAD and return to a blank CICS screen or press PF12 to go to the RAAD Stack and select the line containing “RAAD Initial Menu” to continue without repeatedly signing on to RAAD.

Format Definition

If you want to take advantage of RAAD’s reformatting capabilities, you will need to create one or more Format Definitions. The procedure for doing so is the same as that described above for Spooler Polling, except that you will need to select “Format Definition List.” Formats you establish here can be added to User Profiles using the Restriction screen of the User Profile Definition. See “RAAD User Profile Definition,” page 26, for more information.

QCOPY Submission

If you will be using RAAD to submit CSI-QCOPY jobstreams there are several definitions you will need to supply.

- QCOPY Skeleton Jobstream

The easiest way to define the QCOPY Skeleton Jobstream is by selecting the "Edit JCL" option on the System Configuration Display. See "RAAD System Configuration," page 97, for more information. The contents of the skeleton jobstream are discussed more fully in the section titled "CSI-QCOPY," page 2.

- Report Definition

You must supply a Report Definition for each report that will be input to a CSI-QCOPY job. The procedure for doing so is the same as described above for Spooler Polling except that in this case you will need to select "Report Definition List" from the menu.

- Recipient Definition

Recipient Definitions are optional, but do provide you with a great deal of flexibility for CSI-QCOPY output. The procedure for defining a Recipient is the same as described above for Spooler Polling except that you will be selecting "Recipient Definition" from the menu.

- Output Definition

An Output Definition is required for each CSI-QCOPY job that is to be controlled by RAAD. The Output Definition procedure is the same as described above for Spooler Polling except that you will select "Output Definition" from the menu.

System Configuration

When you are ready to activate RAAD, proceed to the System Configuration Display from the RAAD menu. Review the individual configuration options for the RAAD components you will be utilizing. See "RAAD System Configuration," page 97, for more information.

Migrating from a Previous Release of RAAD

Several changes were made to the format of the RAAD Control File between the last release and this release. This requires that a special execution of the batch facility, CSIRAAD, be run in order to migrate the Control File to this release of RAAD.

After the migration is performed, the Control File formats will be incompatible with previous releases of RAAD.

Use these steps to perform Migration:

- Shut down the CICS containing RAAD. RAAD must not be active when the migration is performed. Normally, this will require that the CICS containing RAAD be shut down for the migration process.
- Run the CSIRAAD batch process similar to that shown below:

```
// JOB RAADCVT
// DLBL RAADFIL,      RAAD Data File
// DLBL RAADCFL,      RAAD Catalog File
// DLBL RAADDFL,      RAAD Data File
// DLBL RAADTFL,      RAAD Temporary File
// EXEC CSIRAAD,SIZE=CSIRAAD
  MIGRATE
/*
/&
```

- Start CICS, and RAAD will be functioning on the new release.

Adding RAAD to CICS Startup and Shutdown

You can control RAAD manually, or you can add a single entry to the CICS startup and shutdown PLT tables as shown below.

CICS Shutdown PLT

```
  // EXEC
ASMA90,SIZE=(ASMA90,100K),PARM='EXIT(LIBEXIT(EDECKXIT))'
           PRINT NOGEN
  * CICS SHUTDOWN PLT
           DFHPLT TYPE=INITIAL,SUFFIX=5S
            . . . . . .
           DFHPLT TYPE=ENTRY,PROGRAM=CSIRAA99
  DFHDELIM DFHPLT TYPE=ENTRY,PROGRAM=DFHDELIM
           DFHPLT TYPE=FINAL
           END
  /*
```

CICS Startup PLT

```
  // EXEC
ASMA90,SIZE=(ASMA90,100K),PARM='EXIT(LIBEXIT(EDECKXIT))'
  * CICSTEST STARTUP PLT
         PRINT NOGEN
           DFHPLT TYPE=INITIAL,SUFFIX=5T
  DFHDELIM DFHPLT TYPE=ENTRY,PROGRAM=DFHDELIM   (NORMALLY
AT TOP)
            . . . . . .
           DFHPLT TYPE=ENTRY,PROGRAM=CSIRAA99
           DFHPLT TYPE=FINAL
           END
  /*
```

During System Startup the RAAD system performs the following steps:

- The RAAD Temporary File is processed, deleting activity records
- The Print queue is processed and those reports not marked restartable are eliminated from the queue
- The RAAD Online Spooling Queue (SPL) is browsed and those SPL entries not flagged as recoverable are deleted
- If you are using the External Device Writer, it is started
- If you are using Spooler Polling, it is started
- The Cross-Partition Interface is started

- Daily Processes are scheduled, if required
- If required, QCOPY Automatic Submission is started

Conversion RAAD

Converting from BIM-PRINT to RAAD

BIM-PRINT customization table entries can be easily converted to RAAD using the RAAD batch utility program CSIRAAD. Use the following JCL as a guide:

```
// JOB RAADCVT
// DLBL RAADFIL,      RAAD Data File
// DLBL RAADCFL,      RAAD Catalog File
// DLBL RAADDFL,      RAAD Data File
// DLBL RAADTFL,      RAAD Temporary File
// EXEC CSIRAAD
   DISABLE         /* NEEDED IF RAAD IS ACTIVE IN CICS */
   CONVERT BIMPRINT ( BIMPRT00 UPDATE )
   ENABLE
/*
```

The “CONVERT” parameter is fully described below.

Not all features of BIM-PRINT were preserved in RAAD. The following is a summary of the major differences:

Function	Differences
Sign On	RAAD requires a separate sign on to access RAAD Facilities. Unlike BIM-PRINT, RAAD requires extra entry screens before you can access the queues. This loss is balanced somewhat by the improved access capabilities provided by the View Reports List screen. See “RAAD View Report(s)”, page 85, for more information.
Queue Display	In BIM-PRINT, you could change Queues and classes on the Queue Display itself. This is no longer possible in RAAD. Instead, you must to return to the View Reports List screen by pressing PF4 and make your changes there. However, the View Reports List screen has more options
View Display	The following BIM-PRINT View Display commands are not supported by RAAD: ICCF, NU, EXIT, SHOW, STAT, PRTR, LX, and SX.
Generic Authorization	RAAD does not contain a generic authorization capability as is available in BIM-PRINT by using BIMPRINT TYPE=ACCESS,CRTID=(list), or SNTOPID=(list) or SNTUID=(list). Each RAAD user must have a unique User Profile entry. It is, however, very easy to copy User Profile definitions.
Printer List	The BIMPRINT TYPE=ACCESS,PRINTER=PRINTERLIST option is not supported by RAAD.

Function	Differences
PF Keys	PF keys 3,4,7,8 and 12 are reserved for RAAD and cannot be altered on the User Profile or by users using the "SET" command in the View Display.
Auto Routing	RAAD Spooler Polling is equivalent to BIM-PRINT Automatic Routing with only minor changes. BIM-PRINT Output Characteristics are not supported by RAAD. RAAD, however, allows more classes on a single Spooler Polling definition, including the keyword "ALL." BIM-PRINT allowed you to specify an alternate printer in Automatic Routing. This is not supported by RAAD. BIM-PRINT Run Time options are not supported by RAAD.
Printer Exit	There is only one Printer Exit available in RAAD, the Printer Exit at print initialization. The exit must be coded as a CICS program.

The output of the CSIRAAD CONVERT process for BIM-PRINT will write several records to the RAAD File. The BIM-PRINT table entries converted are discussed below:

BIM-PRINT Table Entry	Conversion
TYPE=ACCESS	A User Profile entry will be generated for each of the TYPE=ACCESS entries. It will be named "ACC*n*," where this name will correspond to the same entry in the BIM-PRINT customization assembly and *n* is an incremented number. The password for each of these User Profiles will be "NONE." Enter "NONE" as the password. You can use these as a starting point when creating your User Profiles.
TYPE=AUTOROUTE	A Spooler Polling entry will be generated for each of the TYPE=AUTOROUTE entries. The entry will be named "ARTEnnnn," where *nnnn* is sequentially assigned as the BIM-PRINT table is converted.
TYPE=PRINTER	A Device Definition will be generated for each of the TYPE=PRINTER entries. All features available in BIM-PRINT are supported by RAAD.
TYPE=PRINTERLIST	A Device Definition will be generated for each of the TYPE=PRINTERLIST entries.
TYPE=WRITER	A Device Definition will be generated for each of the TYPE=WRITER entries.

No conversion is performed for the following BIM-PRINT options:

TYPE=AUDIT—No conversion is performed. Feature provided in RAAD on the System Configuration

Display.

TYPE=AUTO—No conversion is performed. Feature provided in RADD on the System Configuration Display.

TYPE=BROADCAST—No conversion is performed. Feature is not supported by RAAD.

TYPE=FIELDLIST—No conversion is performed. Feature is not supported by RAAD.

TYPE=SPOOLID—No conversion is performed. Feature is not supported by RAAD.

TYPE=WRITERPATH—No conversion is performed. Feature is not supported by RAAD.

Converting from BIM-ARCHIVE to RAAD

BIM-ARCHIVE data can be easily converted to RAAD using the RAAD batch utility program, CSIRAAD. Use the following JCL as a guide:

```
// JOB RAADCVT
// DLBL RAADFIL,      RAAD Data File
// DLBL RAADCFL,      RAAD Catalog File
// DLBL RAADDFL,      RAAD Data File
// DLBL RAADTFL,      RAAD Temporary File
// DLBL BIMARCR,      DLBL for Archive Rules file required
// EXEC CSIRAAD
   DISABLE         /* NEEDED IF RAAD IS ACTIVE IN CICS */
   CONVERT BIMARCHIVE ( BIMARCR bimarcd )
   ENABLE
/*
```

The “CONVERT” parameter is described below.

The Conversion process does the following:

- Convert and copy each BIM-ARCHIVE Catalog entry to the RAAD File
- Convert and copy each BIM-ARCHIVE Group entry to the RAAD File
- Convert and copy each BIM-ARCHIVE Report ID to the RAAD Catalog File.

Following conversion, the BIM-ARCHIVE Rules file can be eliminated. All Report pointers will have been moved to RAAD. From this point forward, do not use BIM-ARCHIVE for any reason. Retain the BIM-ARCHIVE Data File(s) and identify them to CICS as were for BIM-ARCHIVE. RAAD will continue to use these files as directed.

RAAD does not provide direct support for the BIM-ARCHIVE Group Security Feature. This Security is provided as part of the RAAD User Profile. See the section “RAAD User Profile Definition,” page 26.

CSIRAAD CONVERT Command

The format of the CSIRAAD Convert command is:

```
                | BIMPRINT   ( phase  UPDATE|NOUPDATE )
        CONVERT |
                | BIMARCHIVE ( rules.dlbl data.file.id )
```

For BIMPRINT, the two operands are:

- phase—Name of the BIM-PRINT customization phase. The default is “BIMPRT00.”
- UPDATE|NOUPDATE—NOUPDATE is provided as a debug option for CSI technical support. The default is UPDATE.

For BIMARCHVE, the two operands are:

- rules.dlbl—DLBL name of the Rules file. This DLBL must be included in the jobstream.
- data.file.id—CICS File ID of the primary, or only BIM-ARCHIVE Data file. The default is “BIMARCD.”

RAAD Error Messages

RAAD error messages are generated in the same general format:

```
XXXXXXXX-nnn message text
```

where:

- XXXXXXXX—is the program issuing the Message
- nnn—is the message number
- message text—is the error message in text format.

Note: When reporting an error message to CSI Technical Support, please be sure to have the exact contents of the message available for speedy resolution of the problem.

Since the program name portion of the message can vary depending on the program that encountered the error, messages are described below by number.

001 User Id Required

You must specify a User ID when signing on to RAAD.

002 Password Required

You must specify a Password when signing on to RAAD.

003 Invalid Password Entered

The password given is incorrect or invalid. Correct the password and sign on to RAAD again.

004 User Id Not Found

The User ID entered on the RAAD sign on was not found. Enter a correct User ID and sign on to RAAD again.

005 New Password is Not Confirmed

You attempted to change the password on the RAAD sign on screen but the “Confirm New Password” did not match the “New Password.” The RAAD file was not updated. Reenter the passwords.

006 Password Changed

Your password change was accepted. You must now supply the new password yet again in the “Password” field in order to enter RAAD.

007 Cannot Load System Master Record

This message indicates a severe error in RAAD. Contact CSI Technical support for assistance.

008 Premature end in MENUTAB

This message indicates a severe error in RAAD. Contact CSI Technical support for assistance.

009 File Error (XXXXXXX)

RAAD encountered an error accessing one of its files. The CICS error condition is provided parenthesis. Among the possibilities here are:

- IOERR—In I/O error occurred on the VSAM file. There is a corresponding VSAM message on the VSE console.
- NOTOPEN—File is not open.

010 Invalid Command

The command entered on the Command Line was invalid. Enter the correct command.

011 Invalid Line Command

The command entered on list entries on the screen was invalid. Enter the correct command.

012 '$' Prefixed Entries are Required

You attempted to delete a '$' prefixed entry in one of the RAAD lists. Entries prefixed with '$' are reserved for CSI and cannot be deleted by conventional means.

013 Record Added to File

Informational message indicating successful addition to the RAAD file.

014 Record Updated on File

Informational message indicating successful update of the RAAD file.

016 Invalid User Id

User ID can be from 1 to 16 characters in length and must begin with a non-blank value. User ID can contain imbedded blanks.

017 One Or More Errors Detected

This is a general error message that is generated for certain edit errors. The field or fields in error are highlighted on the screen.

018 Record Already Exists on File

You attempted to add a record to the RAAD file but a record with this name already exists on the file. Correct the ID and resubmit the "Add" request.

019 XXXXXXX Returned From CICS

RAAD encountered an error accessing one of its files. The CICS error condition is provided in the message. Among the possibilities are:

- IOERR—In I/O error occurred on the VSAM file. There is a corresponding VSAM message on the VSE console.
- NOTOPEN—File is not open.

020 User Name is Required

You must have a User ID for a User Profile Record.

021 Only Password Change Allowed for $SYS

The $SYS user is protected and only its password can be changed. The $SYS user is intended as a User with a known set of capabilities for remote support by CSI Technical Support.

023 End of List Encountered

This message arises when scrolling backward or forward and the list is exhausted.

024 Update Request returned xxxxxxxx

RAAD encountered an error when attempting to update the record. The CICS error condition is provided in the message. Among the possibilities are:

- IOERR—In I/O error occurred on the VSAM file. There is a corresponding VSAM message on the VSE console.
- NOTOPEN—File is not open.

025 Queue Required

You must supply a queue name.

026 At Least One Class Required

You must supply at least one spooler class.

027 Id Required

You must supply a unique ID for this record.

028 Duplicate Key on File

A record with this ID already exists on the file.

029 Invalid Catalog or Group Name

Catalog ID or Group Name is required and must begin with A-Z, 0-9.

030 Group Name is Required

Group Name is required and must begin with A-Z, 0-9.

032 Invalid Report Frequency

The Frequency must be one of these:

- 7DAY—Seven day week, Sunday - Saturday
- 6DAY— Six day week, Monday - Saturday
- 5DAY— Five day week, Monday - Friday
- SUN—Sunday only
- MON—Monday only
- TUE—Tuesday only
- WED—Wednesday only
- THU—Thursday only
- FRI—Friday only
- SAT—Saturday only

033 Report Name is Required

You must supply a Report name in order to add Field entries to the Report Definition.

034 Recipient Name is Required

You must supply a name for this Recipient Definition.

035 Output Name is Required

You must supply a name for this Output Definition.

036 Record Added, Cannot Copy New Record

An error occurred attempting to perform the COPY function. The COPY process is partially complete. You will have to manually review and complete the COPY process yourself.

037 Invalid Printer Type

An invalid Printer Type was given. Printer Type can be one of these:

- Printer
- Writer
- List

038 Queue & Program Mutually Exclusive

Writer can be directed either to a Queue or to a Program. Either delete the Program reference, or Delete the Queue reference.

039 Device Name is Required

You must supply a name for this Device Definition.

040 Format Name is Required

You must supply a name for this Format Definition.

041 Invalid Queue

Queue entered is invalid. Queue must be one of the following: ARC, LST, PUN, RAD, RDR, SPL, VML, VMP, VMR, or XMT.

042 You are not authorized to access this Queue

You are not allowed to access this queue according to settings in the User Profile. Contact your System Administrator for assistance.

043 Invalid Queue and Class combination

You are not allowed to access this class and queue according to settings in the User Profile. Contact your System Administrator for assistance.

044 Master Record Not Found - Reset to defaults

RAAD could not find the Master Record. RAAD rebuilt the Master Record from defaults. You will need to re-establish the RAAD System Configuration. Contact CSI Technical Support for assistance.

045 Cannot Load Holiday Table

The named Holiday Table cannot be loaded. Make sure that the name is specified correctly and the table is in a VSE library that is accessible to CICS.

047 Completion Action Missing or Incorrect

The Action code is missing or incorrect. Action can be one of these:

- ALT—Alter
- DEL—Delete
- DSP—POWER Disposition
- LEV—Leave

048 You are not authorized to alter in this Queue

You are not allowed to alter reports in this queue according to settings in the User Profile. Contact your System Administrator for assistance.

049 You are not authorized to delete in this Queue

You are not allowed to delete reports from this queue according to settings in the User Profile. Contact your System Administrator for assistance.

050 You are not authorized to release in this Queue

You are not allowed to release reports in this queue according to settings in the User Profile. Contact your System Administrator for assistance.

051 Nothing to release

There is no report to release.

052 SYSTEM MASTER NOT FOUND

RAAD cannot find the System Master Record. You will need to re-establish the RAAD System Configuration. Contact CSI Technical Support for assistance.

053 SYSTEM QUIESCED

The RAAD system has been quiesced, or inactivated. Try your request later.

054 I/O ERROR

An I/O error occurred. Additional error messages displayed will provide more information on the error that occurred.

055 ABEND occurred in xxxxxxxxxxxxxxxxxx CSIRAAAD JOB=jjjjjjj

An Abend occurred during batch processing. Please be sure to report the exact contents of this message when requesting assistance from CSI Technical Support.

056 Line/Value/Field are mutually exclusive

The Line, Value, and Field options are mutually exclusive. Use ERASE-EOF to remove the unwanted option(s).

057 Must specify either Line, Value, or Field

You must specify one of Line, Value, or Field.

058 Justify must be either Right or Left

The Justify field must be either “Right” or “Left.”

059 Default Field and Value are mutually exclusive

The Field default can be either another field or a literal value, not both.

060 Only one Edit Type allowed

Only one edit type can be set to “Yes.” Remove the erroneous settings using the ERASE-EOF key.

061 Maximum Edit Values Exceeded

A Field can only contain 256 edit values.

062 Field Name is Required

You must supply a name for this Field Definition.

063 Page/Line range Inconsistent

If you specify a From Page, you must also specify a To Page. Likewise, if you specify a From Line you must also specify a To Line.

064 Page/Line/Condition are mutually exclusive

You can specify either a Page range or a Line range, not both.

065 Data and CC are both required

When inserting data, both the data and the Carriage Control must be specified.

066 Data/Exit/Phase are mutually exclusive

You can choose to insert Data, or specify an Exit Program, or a Phase but not more than one of them in the same Insert Entry.

067 Selection Name is Required

You must supply a name for this Selection Entry.

068 READ ERROR PROCESSING JOB=xxxxxx

An error occurred when attempting to write data to the RAAD data file. Be sure to have the exact contents of this message available when requesting assistance from CSI Technical Support.

069 READY FOR POWER CONNECT

Informational message that appears on the VSE console, indicating that the RAAD External Device Writer is waiting for the PSTART command.

070 SUCCESSFULLY ACTIVATED CLASS=xxxx

Informational message that appears on the VSE console when the RAAD External Device Writer is fully active.

071 STOPPED

Informational message that appears in the VSE console when the RAAD External Device Writer is stopped.

072 FLUSHED

Informational message that appears in the VSE console when the RAAD External Device Writer is flushed.

073 PROCESSING TERMINATED DUE TO OPERATOR REQUEST

Informational message that appears in the VSE console when the operator terminates the RAAD External Device Writer.

074 XPCC ERROR, FUNC=xxxxxxxx RC=(rr/cc)

An error occurred in the RAAD External Device Writer. Be sure to have the exact contents of this message available when requesting assistance from CSI Technical Support.

075 POWER TERMINATED ABNORMALLY

This message indicates a severe error outside of the RAAD systems.

076 XPCC FAILURE REAS=xx, RC/FBK=(rr/cc)

An error occurred attempting to write data to the VSE/POWER queues. See the table below for an explanation of the REAS and RC/FBK codes.

077 POWER IN SHUTDOWN - PROCESSING TERMINATED

Informational message that can occur if the RAAD External Device Writer is active when VSE/POWER is shut down.

078 JOB jjjjjjjj/nnnnn RECEIVED FROM POWER

Informational message that appears on the VSE console when the RAAD External Device Writer receives a job from VSE/POWER.

079 JOB=xxxxxxxx/nnnnn mmmmmmmmmmmm

Informational message placed in the RAAD Log when a job is received by the RAAD External Device Writer. The job name and number are recorded in the message along with either:

- BYPASSED—no corresponding Catalog entry was found and report was not stored in the RAAD dataset,
- STORED IN RAAD—report was stored in the RAAD dataset.

080 (xxxx) variable text

An error occurred when printing a report to a RAAD Device. The device name is shown in parenthesis. The remainder of the message is variable and depends on the error encountered. Please be sure to have the exact contents of this message available when requesting assistance from CSI Technical Support.

081 CANNOT LOAD PRINTER TRANSLATE TABLE (XXXX:XXXXXXXX)

The translate table specified in the Device Definition could not be found when the report was printed. The device name and table name are shown within parentheses. Printing continued using the default translate table.

082 REPORT NOT AVAILABLE OR EMPTY XXXXXXXX/XXXXX

The named report was either not found by the printing program or it contained zero lines. RAAD does not process zero line reports. No printing occurred.

083 Exit Program Not Available (XXXX:XXXXXXXX)

The exit program specified in the Device Definition could not be found when a report was printed. The device name and the exit name are shown within parenthesis. Printing continued without the exit program.

084 UNABLE TO LOAD FCB (XXXXXXXX)

The FCB whose name is shown in parenthesis could not be found. Printing continued using the default FCB.

085 TIOA EXCEEDED, LINE TRUNCATED (XXXX:XXXXXXXX/XXXXX)

A very long line was encountered that could not fit within a single buffer. The RAAD Device Name, Job name, and number are shown in parenthesis. Printing continued using only the first buffer's worth of line data.

086 SKIP TO CHANNEL XX NOT FOUND IN FCB (XXXX:XXXXXXXX)

The report contained a skip to channel command and the associated channel was not found in the FCB. The RAAD Device name and job name are shown with parenthesis. Printing continued with the line treated as a print-and-space-one.

087 Invalid Printer Id (XXXX)

Contact CSI Technical Support for assistance. Please be sure to have the exact contents of this message available.

088 You are not authorized for Printer Edit

This message can occur if you enter the "EDIT" command on the Control Devices Display and you are not allowed to edit Device Definitions. Contact your System Administrator for assistance.

089 WRITER TO XXX QUEUE IS NOT SUPPORTED

Contact CSI Technical Support for assistance. Please be sure to have the exact contents of this message available.

090 WRITER PROGRAM (XXXXXXXX) CANCELED REQUEST

Your writer program cancelled the writer activity. The program name is shown within parenthesis.

091 WRITER PROGRAM (XXXXXXXX) NOT FOUND

The writer program could not be found. The program name is shown in parenthesis.

093 TCP/IP ERROR - xxxxxxxxxxxxxxx

An error occurred in the RAAD TCP/IP interface. Please be sure to have the exact contents of this message available when contacting CSI Technical Support for assistance.

094 TCP/IP RESPONSE - xxxxxxxxxxxxx

An error occurred in the RAAD TCP/IP interface. Please be sure to have the exact contents of this message available when contacting CSI Technical Support for assistance.

095 XTERNAL INTERFACE AT MAXIMUM TASKS

Contact CSI Technical Support for assistance.

099 HOLIDAY TABLE (XXXXXXXX) YYYYYYYYYYYYYYYY

There is a problem with the Holiday Table. The Table name is shown in parentheses. The Nature of the problem is described in the body of the message.

100 UNABLE TO ACCESS RAADLOG - DAILY REPORTS NOT RUN

Contact CSI Technical Support for assistance.

101 Job Name is Required

A Job Name must be supplied in a Report Definition.

102 Group is Required for Queue=RAD

If the Report Definition refers to a report stored in the RAAD dataset, the Group name must be supplied as part of the report identification.

103 Output Id Missing or Not Found

This message can arise if you attempt to issue either the “RUN” or “GENERATE” commands on the Output Definition Display and have not first added the Output record to the RAAD file. Add the record, and then retry the command.

104 Report 'XXXXXXXX' Missing For Output 'XXXXXXXX'

When a QCOPY jobstream is generated, the named Report Definition could not be found for the named Output Definition. This message is written to both the RAAD log and inserted in the generated jobstream.

105 Equated Field 'xxxxxxxx' Not Found

When a QCOPY jobstream is generated, the named Field could not be resolved because it is equated to another Field, which could not be found. This message is written to both the RAAD log and inserted in the generated jobstream.

106 Format 'XXXXXXXX' Not Found

When a QCOPY jobstream is generated, the named Format Definition could not be found. This message is written to both the RAAD log and inserted in the generated jobstream.

107 JCL Record Set Incomplete

When a QCOPY jobstream is generated, the "#INCLUDE" statement could not be located in the skeleton QCOPY jobstream. Correct the skeleton jobstream and regenerate the QCOPY job.

108 Cannot Resolve Condition (XXXXXXXX/XXXXXXXX)

When a QCOPY jobstream is generated, RAAD was unable to resolve a condition in one of the Selection Entries. The Output name and Selection name are shown in parenthesis.

109 Must Be Even Number of Range Values

When using the RANGE or NOTRANGE Field Edits, you muse specify the values in pairs.

110 Equated Field Must Precede This Field

Because of processing limitations in CSI-QCOPY, when equating one Field to another, the equated to field must be previously defined. Since RAAD stores Fields alphabetically, care must be exercised when using the equated to capability.

111 Field Required

A Field name is required in order to process a Selection Entry.

112 Conditions Not Allowed

Some of the Selection Entry options operate without conditions. Choose the proper method of activating this Selection Entry.

113 One or More Conditions Required

Some of the Selection Entry options require conditions. Choose the proper method of activating this Selection Entry.

114 Route TO and Generate Mutually Exclusive

The result of Spooler Polling selection can be either a printer or a RAAD Output to generate, but not both.

115 XPCC ERROR - message.text

An XPCC error occurred in the Cross Partition Interface. Please have the exact contents of this message available when contacting CSI Technical Support for assistance.

116 Invalid JCL

When a QCOPY job is submitted to the VSE/POWER RDR queue for execution, RAAD performs a simple edit: the first line must begin with "* $$ JOB" and the last line must be "* $$ EOJ". This message arises when one or the other of these conditions is not met.

117 Unauthorized Printer

You are not authorized to use this printer. Contact your System Administrator for assistance.

118 PFxx Reserved for RAAD

You attempted to change on of the reserved PF key settings. This PF key cannot be customized.

119 PFxx Invalid PF Key

An invalid PF key setting was specified. Correct the PF key setting and resubmit the command.

120 No Remaining TCP/IP ECBs

Contact CSI Technical Support for assistance.

121 Invalid Device Id

An invalid Device ID was specified for the INDirect command.

122 PC Download Failed

PC Download using TCP/IP failed. Additional error messages will be present on the PC.

123 Cannot Start 2nd Download For Device=xxxx

A second PC attempted to initiate TCP/IP Download processing for this device. This is not allowed. Only one PC can contact a Download Device.

124 Group Record XXXXXXXX Not Found

The Group record you entered on the "GROUP" command could not be found. Correct and reenter the command.

125 Cannot Change Record Key

You cannot use the UPDATE command to change the contents of the key field (usually the Name or ID field). Instead, you must Add a new entry and then, if necessary, delete the old one.

126 Invalid Hex String

Hexadecimal data for a printer string either was an odd number of bytes, or contained an invalid character. Hexadecimal data must be 0-9, A-F only.

127 String Table Reference Invalid

To use the String Table capability in Printer Strings, you must first define the string. You can do so from the Device Definition Display by pressing PF9.

129 INCORRECT FILE FORMAT, RUN MIGRATE

You must run the Migration Process before you can successfully use this release of RAAD with files created by a previous release of RAAD.

130 DOC Queue Unavailable

The DOC queue has not been activated. See the Configuration Display for more information.

VSE XPCC Response Codes

Several of the messages generated by RAAD contain a return code (RC) and/or a reason code (REAS) from VSE. The following tables define the meanings of those codes.

Return Codes (RC)

- 03—MORE CONNECT REQUESTS FOR THIS SUBSYSTEM PENDING
- 04—OTHER SIDE DID NOT IDENT UNTIL NOW
- 05—OTHER SIDE DID NOT CONNECT UNTIL NOW
- 06—XPCCB CONTROL-BLOCK FORMAT ERROR
- 07—WRONG IDENTIFY TOKEN
- 08—WRONG PATH ID TOKEN
- 09—REQUEST WAS DONE FROM A TASK WITH DIFFERANT TASK-ID
- 0A—INVALID BUFFER LIST (INDICATOR WRONG)
- 0B—TOO MANY BUFFERS OR BUFFER LENGTH more than 16 MEG
- 0C—RECEIVING BUFFER TOO SMALL
- 0D—TOO MANY CONNECT'S FOR A USER APPL
- 0E—REQUEST NOT POSSIBLE BECAUSE NO SYSTEM STORAGE AVAILABLE
- 0F—AT LEAST ONE PARTNER OF A CONNECTION MUST BE A SUBSYSTEM
- 10—NO REQUEST PENDING
- 11—REQUEST WAS CLEARED
- 12—LINE ALREADY BUSY
- 13—REPLY CMD WAS ISSUED BEFORE DATA RECEIVED
- 14—CONNECTIONS STILL BUSY FOR APPL
- 15—BUSY FROM OWN SEND
- 16—SEND FROM OTHER SIDE PENDING
- 17—OTHER SIDE ISSUED TERMQSCE
- 18—A CONNECTION WAS NEVER EXISTING
- 19—THE OTHER SIDE TERMINATED NORMALLY
- 1A—THE OTHER SIDE TERMINATED ABNORMALLY
- 1B—REQUEST ALREADY CLEARED
- 1C—XPCCB ADDR OF THIS REQ IS DIFFERENT FROM CONNECT

Reason codes (REAS)

- 01—AFTER SEND/SENDR THE RECEIVER ISSUED PURGE
- 02—SENDER ISSUED CLEAR BEFORE RECEIVER WAS ABLE TO RECEIVE/REPLY
- 03—AFTER SENDR CMD WHEN THE RECEIVE IS EXECUTED BY PARTNER
- 05—OTHER SIDE TERMINATED DURING CONNECT

The following bits are connected with an OR to the above bits.

- 40—OTHER SIDE ISSUED DISCONNECT
- 80—OTHER SIDE WAS DISCONNECTED DUE TO ABNORMAL TERMINATION

POWER XPCC Response Codes

Several of the messages generated by RAAD contain a return code (RC) and a feedback code (FDBK) from POWER. The following list defines the meanings of those codes.

RC/FDBK

04/01—JOB/OUTPUT NOT FOUND

04/02—JOB/OUTPUT PROTECTED

04/03—JOB/OUTPUT MARKED ACTIVE (BUSY)

04/08—SHORT ON SPOOL FILE SPACE (SOD)

04/09—SHORT ON ACCOUNT FILE SPACE (SOA)

04/0A—REQUEST PROHIBITED IN BROWSE MODE

04/0B—NOTHING FOUND IN QUEUE(S) (DISPL)

04/0D—NO MATCHING USER ID

08/01—INVALID SPL

08/05—INVALID JOB NAME

08/06—INVALID QUEUE IDENTIFIER

08/07—INVALID CLASS

08/08—INVALID PASSWORD

08/09—INVALID USER/REMOTE-ID

08/0A—INVALID RECORD FORMAT

08/0B—INVALID DISPOSITION

08/0C—INVALID PRIORITY

08/0D—INVALID SYTEM IDENTIFIER

08/0E—INVALID DESTINATION NODE

08/0F—INVALID DEST. USER/REMOTE

08/10—INVALID FORMS IDENTIFIER

08/11—INVALID FCB NAME

08/1A—BUFFER TOO SMALL

08/1E—INVALID PROGRAMMER NAME

08/1F—INVALID ROOM NUMBER

08/20—INVALID DEPARTMENT NUMBER

08/21—INVALID BUILDING NUMBER

08/22—CONFLICTING SPECIFICATIONS

08/23—RECEIVED RECORD TOO LARGE

08/24—INVALID BUFFER TYPE

08/25—REQUEST OUT OF SEQUENCE

08/26—SPL RECEIVED OUT OF SEQUENCE

08/27—RECEIVED BUFFER OUT OF SEQUENCE

08/28—REQUEST PROHIBITED

08/29—INVALID SIGNAL SPECIFICATION

08/31—INVALID JOB NUMBER(=0)

08/32—INVALID JOB SUFFIX NO (>127)

08/33—INVALID USER INFORMATION

08/35—UNEXPECTED RESPONSE RECEIVED

08/46—INVALID SECURITY USERID

08/47—INVALID SECURITY PASSWD

08/48—INVALID PROCESSING MODE

0C/01—SEND ISSUED/ BUT SENDR REQUIRED

0C/03—BUFFER TOO LARGE

10/03—CONNECTION ALREADY ACTIVE

10/06—SEVERE INTERNAL ERROR

Appendix: Sample QCOPY Process

In this sample, the CICS Transaction Server Dump Report, output from DFHDU410, is processed by CSI-QCOPY. As the report is processed, the output is segmented whenever a new transaction dump is encountered. At the end, there are one or more reports in the POWER LST queue, each containing a single CICS Transaction Dump.

Several RAAD screens were edited to accomplish this:

- Report Definition—Defines the Dump Report.
- Field Definitions—Definitions provided for Abend code, Transaction ID, and Page number to control segmentation.
- Output Definition—Defines the Output of the QCOPY process.
- Recipient Definition—Defines the Characteristics of the Output report(s).
- Segment Definition—Defines the criteria to segment the output report. In this case, segmentation is done whenever page 1 is encountered.
- QCOPY Job Definition—Specifies the QCOPY report by combining the Report Definition and Output Definition.

Finally, the whole process was automated by the addition of a single Spooler Polling Definition, which causes the QCOPY process to run whenever the CICS Dumps appear in the LST queue.

Screen captures for each of these definitions are shown next:

Report Definition

Defines the Report and where it will be found in the POWER LST queue when the CSI-QCOPY job step runs. Three fields are identified for this report, Abend Code, Page Number, and Transaction id. Screen captures for each are shown below the report definition.

```
RAAD008            Report Archive And Distribution System             03/24/04
 CMD: _____________________      Report Definition                      13:45:16
  Report: CI2TSDMP Desc: T SERVER TRANY DUMP_____________________________
    Job Name: CI2TSDMP Queue: LST    Group: ________
         Cls: A Dsp: _ Pri: _ Rem: ___ Sys: _    Form: ____
   Orig Node: _________  Dest Node: _________ User Info: ________________
   Orig User: _________  Dest User: _________
  Completion: ACT C D P S REM DST.NODE DST.USER
              Alt L K _ _ ___ _________ _________
 CMD NAME     TYPE     DESCRIPTION
 --- -------- -------- ---------------------------------------------
 _   CODE     Field    ABEND CODE
 _   PAGE     Field    PAGE NUMBER
 _   TRAN     Field    TRANSACTION
 _   _________ _________
 _   _________ _________
 _   _________ _________
 _   _________ _________
 _   _________ _________
     PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 10:Prev 11:Next 12:Stack
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```

Code Field

The abend code is found on line 1, column 48, and is 4 bytes long.

```
RAAD025            Report Archive And Distribution System             03/24/04
CMD: _____________________      Field Definition                       13:46:08
Report Id: CI2TSDMP
 Field Id: CODE     Desc: ABEND CODE_____________________________________
         Line: 001 Number of Lines: 001 Column: 048 Length: 004
   or Literal: ____________________________________
     or Field: ________
         Mask: ____________________________________
               Extract:Mask: No  Offset: 000 000 Justify: Left_
      Default: ____________________________________ or Field: ________
         Edit:Match Any: Yes All: No
               Range: No  NotRange: No  Value: Yes NotValue: No
     001-046 EDIT.VALUE                       EDIT.VALUE
      of  00 -------------------------------- --------------------------------
             ____________________________________ ____________________________________
             ____________________________________ ____________________________________
             ____________________________________ ____________________________________
             ____________________________________ ____________________________________
     PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 10:Prev 11:Next 12:Stack
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```
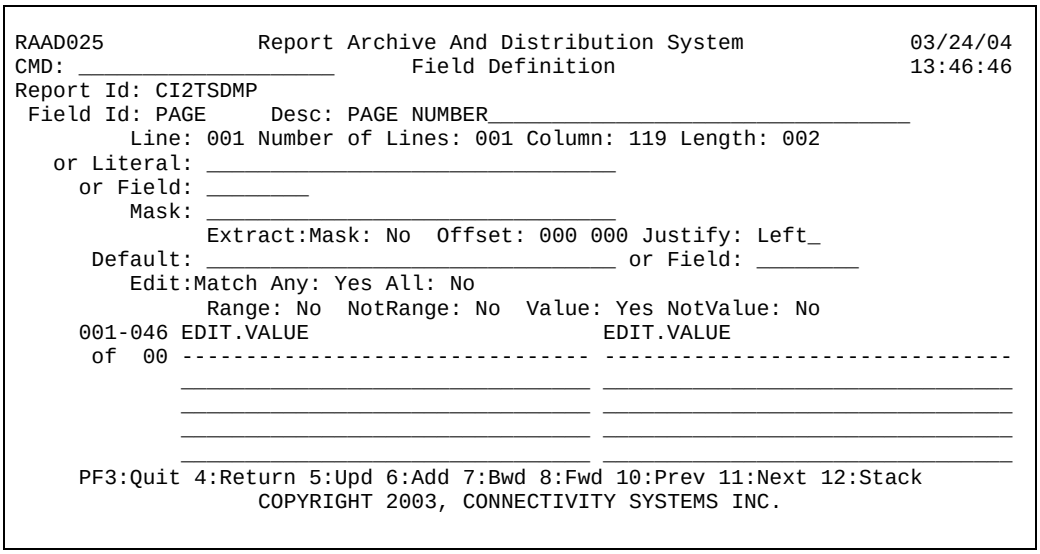
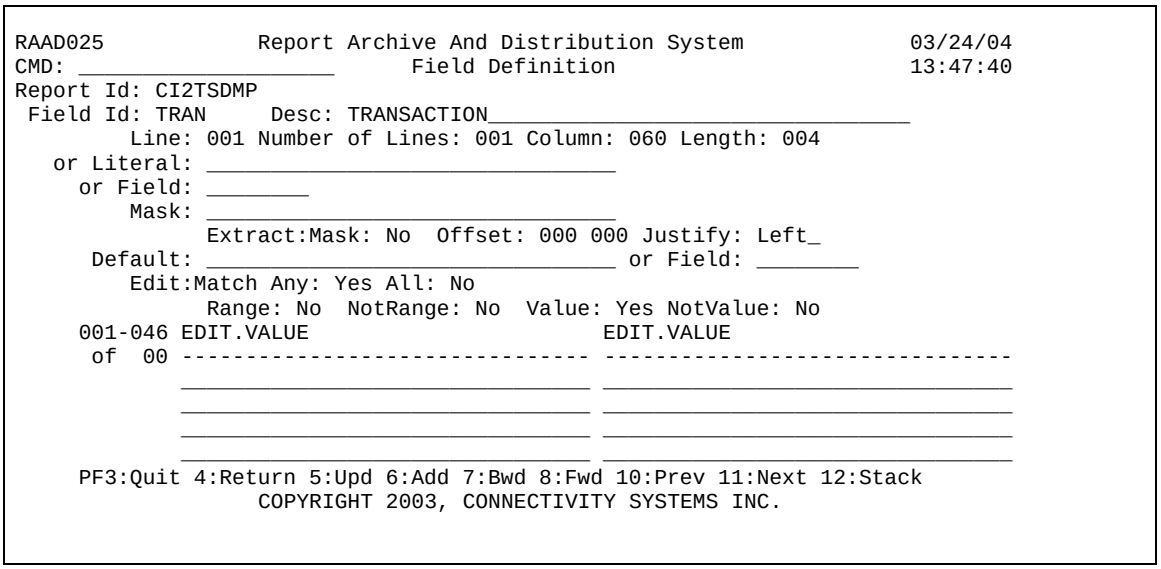

Define Page Field

We are only interested in the last two of the columns of the page number. See the segment screen below for how this is used.



Define Tran Field

Transaction ID is found on line 1, column 60, and is 4 bytes long.



Output Definition

The output contains a Recipient, TDUMP, which is defined below. In addition, a single segment command is used to cause the input report to be split into one or more output reports.

```
RAAD010            Report Archive And Distribution System            03/24/04
CMD: ____________________     Output Definition                      13:48:27
 Id: TRNYDUMP Desc: TRANY DUMPS_____________________________________
    Recipient: TDUMP___ Edit: _
       Format: _________ Edit: _
    Selection List
    CMD ID       TYPE     DESCRIPTION
    --- -------- -------- -------------------------------------------
    _   SEG      Segment  SEGMENT ON PAGE NUMBER
    _   _________ _________ ____________________________________________
    _   _________ _________ ____________________________________________
    _   _________ _________ ____________________________________________
    _   _________ _________ ____________________________________________
    _   _________ _________ ____________________________________________
    _   _________ _________ ____________________________________________
    _   _________ _________ ____________________________________________
    _   _________ _________ ____________________________________________
    _   _________ _________ ____________________________________________
    _   _________ _________ ____________________________________________
     PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 10:Prev 11:Next 12:Stack
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```

Segment Definition

The segment definition specifies that whenever the last two columns of the page number are " 1," a segment operation to be performed.

```
RAAD026C           Report Archive And Distribution System            03/24/04
CMD: _____________________ S E G M E N T   Definition                13:49:25
  Output Id: TRNYDUMP
       Name: SEG      Desc: SEGMENT ON PAGE NUMBER
       Type: Segment  (Exclude/Insert/Segment/Select/Stop)
  Segment: First: No  Report: No  None: No  Now: Yes After: No
  Condition(s):                             001-029 OF 001
       CONT NAME     COND VALUE(S)
       ---- -------- --   --------------------------------
       ___  PAGE____ EQ   ' 1'_____________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___  ________ __   _____________________________________
       ___ ________ __   _____________________________________
     PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 10:Prev 11:Next 12:Stack
                 COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

Recipient Definition

The Recipient Definition illustrates a couple of CSI-QCOPY's tricks. First, the Job Name (JNM) is constructed from fields one and three (Abend Code and Transaction ID, respectively). Secondly, the date and time of the report is added to the User Info (User) field through the use of CSI-QCOPY's internal fields %CURMO and %CURDY.

```
RAAD009            Report Archive And Distribution System            03/24/04
CMD: ____________________   Recipient Definition                     13:50:02
     Id: TDUMP    Desc: TRNYDUMP OUTPUT
 Banner: No  Index: No  Position:Line: 010 Col: 010
         _____________________________
         _____________________________
         _____________________________
         _____________________________
  Queue: LST   (LST/RDR/PUN)
  Class: L
   Copy: 001
   Dest: ________ / ________
   Disp: D
    Fno: ____
    Jnm: '%FLD(1)%FLD(3)'_____________________________________________________
   Jsep: 0
    Pri: 0
    Pwd: ________
    RBS: 00000
 Remote: 000
  SysId: 0
   User: 'TRNYDUMP %CURMO/%CURDY'____________________________________________
            PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 12:Stack
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```

QCOPY Job Definition

Here, we put all of the preceding together in order to generate a CSI-QCOPY job.

```
RAAD018            Report Archive And Distribution System            03/24/04
CMD: ____________________   QCOPY Job Definition                     13:51:01
 Id: TRNYDUMP Desc: SPLIT TRANSACTION DUMPS_____________________
    Recipient: TDUMP___ Edit: _   Report Active: No   Last Run : Date: 03/23/03
          JCL: ________ Edit: _                                   Time: 17:40:58
          Run: HH: __ MM: __ Frequency: ____ Holiday Table Name: ________
 Merge Inputs: No    ________ / _  ________ / _  ________ / _  ________ / _
                     ________ / _  ________ / _  ________ / _  ________ / _
         Input / Output List
         CMD ID       TYPE     DESCRIPTION
         --- -------- -------- ------------------------------------------
         _   CI2TSDMP Input___ T SERVER TRANY DUMP
         _   TRNYDUMP Output__ TRANY DUMPS
         _   ________ ________ ____________________________________________
         _   ________ ________ ____________________________________________
         _   ________ ________ ____________________________________________
         _   ________ ________ ____________________________________________
  PF3:Quit 4:Return 5:Upd 6:Add 7:Bwd 8:Fwd 9:Sel 10:Prev 11:Next 12:Stack
                  COPYRIGHT 2003, CONNECTIVITY SYSTEMS INC.
```

Spooler Polling Definition

Lastly, we automated the process by informing the Spooler Polling feature of RAAD to look for the original output from the DFHDU410 program and, when encountered, generate a CSI-QCOPY job named "TRNYDUMP," which is defined immediately above. After the job is submitted, its disposition will be changed to "H" so that Spooler Polling will not see it again and generate a second CSI-QCOPY job.